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UNIVERSITY OF ILLINOIS

Vol. VIII. No. 1.

PRESIDENT'S OFFICE

CARROLL COLLEGE

BULLETIN

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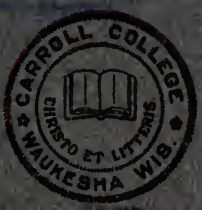

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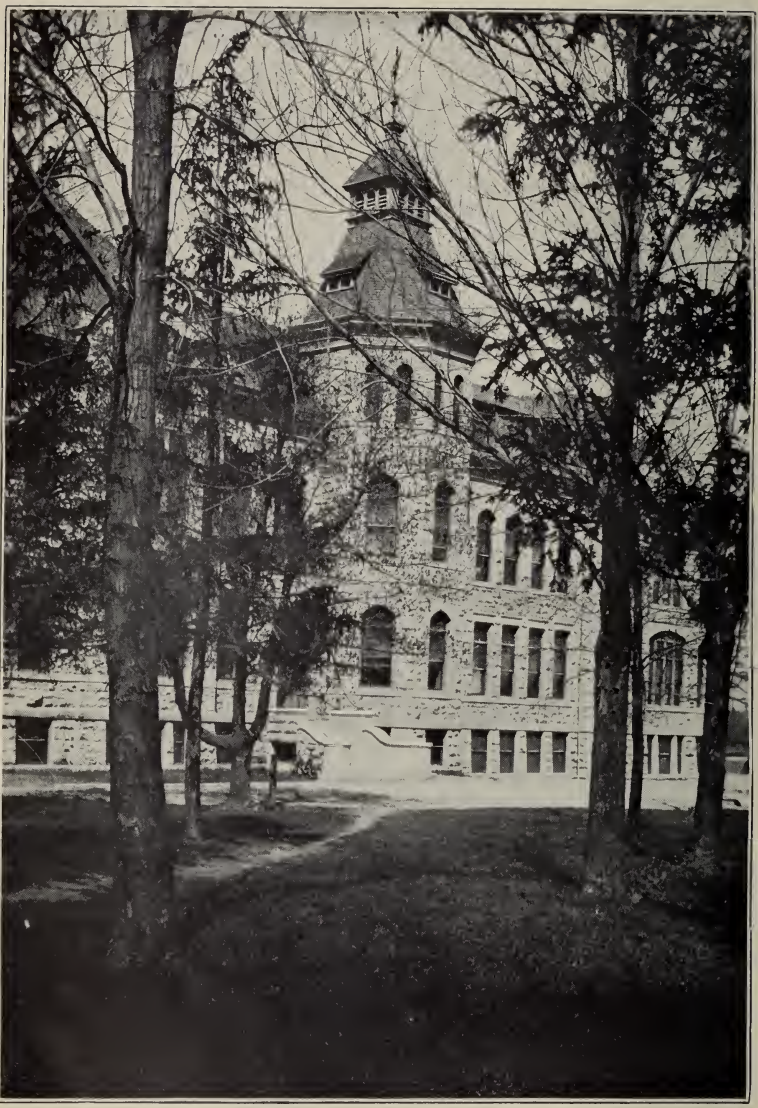
THE ANNUAL CATALOGUE

1910-1911

WAUKESHA WISCONSIN
MARCH 1911



Vol. VIII. No. 1.

CARROLL COLLEGE BULLETIN

UNIVERSITY OF ILLINOIS

PRESIDENT'S OFFICE.

THE ANNUAL CATALOGUE

FOR THE ACADEMIC YEAR

1910-1911

WITH ANNOUNCEMENTS FOR THE YEAR

1911-1912

WAUKESHA WISCONSIN

MARCH 1911

Published quarterly by the College, and entered at the postoffice, Waukesha, Wis., as second-class matter, under act of Congress of July 16, 1894

ARTISTS
HAMMERSMITH
ENGRAVING
ENGRAVERS
PUBLISHERS
MILWAUKEE
WISCONSIN

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1911 CALENDAR 1911

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Calendar for 1911-1912

1911

January 30	Second semester begins; Monday.
February 9	Day of Prayer for Colleges; Thursday.
March 23	Annual Prize Debate between the Aristonian and Philomathean Literary Societies; Thursday, 8 P. M.
March 24	Spring recess begins; Friday, 4 P. M.
April 4	Spring recess ends; Tuesday, 8 A. M.
June 7	Meeting of Board of Trustees; Wednesday.
June 11	Baccalaureate Sermon; Sunday.
June 12	Academy Graduation; Monday, 10 A. M.
June 12	Annual Recital by Departments of Music and Oratory; Monday, 8 P. M.
June 13	Chapel Service; Tuesday, 10 A. M.
June 13	Class Day Exercises; Tuesday 3 P. M.
June 13	Alumni Banquet; Tuesday, 6 P. M.
June 14	Commencement Exercises; Wednesday, 10 A. M.
June 14	President's Reception; Wednesday, 3 to 5 P. M.

September 12	Registration; Tuesday, 9 to 12 A. M., 1 to 4 P. M.
September 13	First semester begins; Wednesday, 10 A. M.
November 30	Thanksgiving; a holiday.
December 15	Christmas recess begins; Friday, 4 P. M.

1912

January 2	Christmas recess ends; Tuesday, 8 A. M.
January 26	First semester ends; Friday.
January 29	Second semester begins; Monday.
February 8	Day of Prayer for Colleges;Thursday.

March 22	Annual Prize Debate between the Aristonian and Philomathean Literary Societies; Thursday, 8 P. M.
March 23	Spring recess begins; Friday, 4 P. M.
April 3	Spring recess ends; Tuesday, 8 A. M.
June 6	Meeting of the Board of Trustees; Wednesday.
June 10	Baccalaureate Sermon; Sunday.
June 11	Academy Graduation; Monday, 10 A. M.
June 11	Annual Recital by Departments of Music and Oratory; Monday, 8 P. M.
June 12	Chapel Service; Tuesday, 10 A. M.
June 12	Class Day Exercises; Tuesday, 3 P. M.
June 12	Commencement Exercises; Wednesday, 10 A. M.
June 13	President's Reception; Wednesday, 3 to 5 P. M.

The Board of Trustees.

Elected by the Synod of the Presbyterian Church of Wisconsin.

Term Expires June, 1912.

Andrew Stevenson,	Chicago.
Joseph E. Wildish.	Milwaukee.
R. P. Perry,	Reedsburg.
Barton B. Bigler, D. D.,	Racine.
Andrew Week,	Stevens Point.
Charles E. Hastings,	Chicago.

Term Expires June, 1913.

Charles L. Thompson, D.D., LL.D.,	New York City.
Rev. Thos. S. Johnson,	Beaver Dam.
Hon. Harlan P. Bird,	Wausaukee.
Jacob Mortenson,	Oak Park, Ill.
Andrew J. Frame, LL. D.,	Waukesha.
Rev. David C. Jones,	La Crosse.

Term Expires June, 1914.

Paul B. Jenkins, D. D.,	Milwaukee.
William W. Perry,	Milwaukee.
Henry M. Youmans,	Waukesha.
Walter H. Bissell,	Wausau.
William Mainland,	Oshkosh.
Hon. William D. Connor,	Marshfield.

Term Expires June, 1915.

Rev. Everett A. Cutler,	Milwaukee.
Samuel M. Harding,	Waukesha.
Alfred S. Badger, D.D.,	Waukesha.
S. Frank Shattuck,	Neenah.
Henry Phelps,	Waukesha.

President Wilbur O. Carrier, D.D., *ex officio.*

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Alfred S. Badger, D.D.,	Vice-President.
Henry Phelps,	Secretary.
Walter R. Frame,	Treasurer.

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W. O. Carrier, D.D., A. S. Badger, D.D.
S. M. Harding. H. M. Youmans.
Henry Phelps.

FINANCE COMMITTEE.

William Mainland. Frank Shattuck.
Andrew Week. Hon. W. D. Connor.
Jacob Mortenson.

INSTRUCTION COMMITTEE.

Alfred S. Badger, D.D. W. H. Bissell.
Paul B. Jenkins, D.D. Rev. E. A. Cutler.
Joseph E. Wildish.

AUDITING COMMITTEE.

H. M. Youmans. Henry Phelps.

VISITING COMMITTEE OF THE SYNOD OF WISCONSIN.

Rev. John J. Clelland. Rev. Jos. M. Duer.

The Faculty

WILBUR OSCAR CARRIER, M. A., D. D.
PRESIDENT.
Professor of Biblical Literature and Ethics.

SAMUEL BEATTY RAY, M. A.
DEAN OF THE COLLEGE.
Professor of Mathematics and Education.

MAY NICKELL RANKIN, B. A.
Ralph Voorhees Professor of Public Speaking and Dramatic Literature.

WILLIAM ARTHUR GANFIELD, M. A.
Professor of History and Economics.

AMANDA MOORE FLATTERY, M. A.
Professor of Greek and Instructor in German.

HARRY LINN STARR, M. A.
Professor of English.

JAMES ELCANA ROGERS, PH. D., D. D.
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LLOYD SLOTE DANCEY, M. A.
Professor of Physics and Applied Mathematics.

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DEAN OF WOMEN.
Professor of Modern Languages.

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B. SMITH HOPKINS, PH. D.
Professor of Chemistry.

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Special Lecturer and Field Secretary.

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Professor of Music: Piano, History of Music, and Theory.

LUCY JOCELYN BUSHNELL.
Professor of Music: Voice.

WILFRED CHARLES BLEAMASTER, B. A.
Instructor in History.

ADA EMMA SCHNEIDER, B. A.
Instructor in German and English.

BLANCHE WILLSON.
Instructor in Piano, Mandolin, and Guitar.

FLORENCE ARMSTRONG PLOWMAN.
Instructor in Stenography and Typewriting.

HENRY LAWRENCE HUENINK,
Laboratory Assistant in Chemistry.

ROYDEN ARTHUR LAING.
Clerk in Chemical Laboratory.

HARRY ARTHUR TORHORST.
Instructor in Violin.

WILFRED CHARLES BLEAMASTER, B. A.
Physical Director.

SARA ELLIOTT, M. D.
Examining Physician for Women.

ABBIE HASBROUCH BLEAMASTER.
Physical Director for Women.

OTHER OFFICERS.

SAMUEL BEATTY RAY, M. A.
Registrar and Secretary of the Faculty.

AMANDA MOORE FLATTERY, M. A.
Librarian.

AMON BENTON PLOWMAN, PH. D.
Curator of the Museum.

MRS. LILIAN CRAVEN.
Matron of Elizabeth Voorhees Hall.

ALTHIE ANTHIE PITTS.
Secretary to the President.

B. W. WATT.
Custodian.

COMMITTEES OF THE FACULTY.

CURRICULUM AND SCHEDULE—Ray, Starr, Hopkins.

LIBRARY—Flattery, Starr, Hopkins.

GRADUATION—Ray, Theiss, Ganfield.

PUBLICATION—Starr, Ray, Flattery, Plowman.

PUBLIC EXERCISES—Ganfield, Rogers, Rankin.

RULES AND DISCIPLINE—Ray, Ganfield, Guild, Plowman.

ATHLETICS—Bleamaster, Dancey.

PROPERTY—Dancey, Bleamaster.

STUDENT ORGANIZATIONS—Plowman, Ganfield, Guild.

SOCIAL AFFAIRS—Hopkins, Plowman, Rankin.

STUDENT ADVISERS—Ray, Hopkins, Plowman, Guild, Flattery, Starr, Dancey, Rogers, Ganfield, Theiss.

RELIGIOUS WORK AND CHRISTIAN ORGANIZATIONS—Ganfield, Rogers, Guild.

PRESIDENT CARRIER, *ex-officio* member of all committees.

CARROLL COLLEGE.

The American College.

"A college, according to the common definition, is the place where certain general studies are taught, such as mathematics, the humanities, the sciences." It is this. But it is far more than this. It is "an aggregate of influences which should act upon young men during the plastic years in such a way that on attaining manhood they may be able to confront the world with success." In this conception of the term, the college is a distinctively American institution. Its origin, and the determination of the nature of its development, are to be found in the conditions of American life and character, conditions demanding large vision, adaptability, power of initiative, combined with a high sense of personal responsibility.

Advantages of the College.

For the realization of these ends the college possesses distinct advantages. Here the student will do his work with classes of moderate size, with required recitations, and with examinations. He will be subject to the personal influence of his teachers, men and women chosen on the basis of sound scholarship, broad culture, and high character, and will receive from them such personal attention as is necessary for the development of his highest individual possibilities. Here he will find adequate equipment for his needs, and, at the same time, all the opportunities for study, for investigation, for culture, that he can successfully appropriate in his undergraduate course. The moderate size of the college community makes it possible for the individual student to comprehend, in his experience and opportunities for contact, all, or a very considerable portion of, the interests and activities of the institution, rather than a relatively small and isolated portion, as in the larger and more pretentious institutions. Hence it is that the graduates of the college have had so large a share in the leadership of our country.

Purpose of Carroll College.

It is the primary purpose of Carroll College to maintain and promote the ideal of a broad, liberal culture, to direct its activities and methods toward the development of mind and character, the making of men and women, in all its plans and methods recognizing the principle that a broad foundaton of general culture should precede all specialization and professional training, and that the successful life work of a scholar, or man of affairs, is conditioned on the symmetrical development of the whole man.

Courses of Study.

At the same time due recognition is given to the conditions and demands of contemporary life. Recent and prevailing tendencies in our educational system and ideals have thrown added emphasis upon the function of the college in the training of the individual for the service of society. The largely increased, and increasing, demands of professional and technical training, the need of greater adaptability and command of individual powers in commercial and industrial life, render the disciplinary and cultural training of the college more and more necessary for success in these lines. The courses of study of Carroll College represent an attempt to preserve a just balance between studies of cultural and disciplinary character and those possessing an intrinsic practical value. The system of major and minor studies, of broad and representative required subjects, with large opportunities for elective work, makes it possible for the student, while pursuing a liberal course, at the same time to concentrate his attention and effort upon some one subject to such a degree as to realize in that subject a considerable acquisition and attainment, some degree of mastery, which may be utilized in a practical way after graduation.

Any of the following subjects may be chosen as a major: Philosophy; History; English; Biology; Mathematics; German; Latin; Chemistry; Physics. Certain other subjects not offered as majors may be taken in conjunction with cognate subjects to constitute a major. The suggested groups given under the various departmental statements in this catalogue show some of the possible courses.

Atmosphere of the College.

Carroll College is preeminently a Christian College. While high scholarship and broad culture are emphasized, the supreme importance of things spiritual is constantly recognized. The Bible is given its rightful place in the college curriculum, and the principles of Christianity are inculcated in the chapel service and in the class room. The members of the faculty are all Christian men and women who endeavor to present truth from the standpoint of reverent regard for things sacred and eternal, and to help the students rightly to interpret the facts and laws of life. The atmosphere of the college is distinctly religious but not sectarian. Loyal to the trust imposed by the Synod of the Presbyterian Church of Wisconsin, the college seeks to foster a strong spiritual life, interpreting the spiritual life, not as something distinct and apart from the other phases of life, but as the finest development of them all in perfect and harmonious combination. Several Christian denominations are represented in the Board of Trustees and in the Faculty, and students of all denominations find here a friendly and congenial atmosphere.

Carroll College a Coeducational Institution.

As men and women are intended for mutual service and in all the phases of life are associated, the ideal condition for their mental and moral development is, not segregation, but association, of the sexes. The policy of coeducation has been adopted in the belief that it is the natural method of training young people. It lessens the dangers of college life and increases its advantages. The healthful interchange of thought and feeling serves as an intellectual stimulus and a moral restraint, while the normal association of young men and women in class room and in all social and literary organizations of the college, tends to broaden the sympathies, and to awaken true manliness and womanliness.

Location.

Waukesha is a city of about nine thousand inhabitants, picturesquely situated in the midst of the rolling country of the Fox River Valley, a country of hills and lakes, of woods and fertile

fields. The college buildings are upon the heights in the south part of the city and command an extended view of a rarely beautiful landscape. The beauty of the surrounding country, the proverbial healthfulness of the locality, and the purity of its far-famed waters make it a most desirable place of residence. Because of the proximity of Milwaukee many of the advantages of a large city are realized. Waukesha is a city of churches whose pastors are ready to extend a welcome to the young people of the college. The moral tone of the community is wholesome and the people are deeply interested in all educational work.

Waukesha is located on lines of three principal railway systems of Wisconsin, the Chicago and Northwestern, the Chicago, Milwaukee and St. Paul, and the Wisconsin Central division of the Minneapolis, St. Paul, and Sault Sainte Marie, and is thus easily accessible from all parts of this and the adjoining states. It is one hundred miles from Chicago, by any of the above named roads, and twenty miles from Milwaukee. Hourly service to the latter city is provided by the electric interurban railway.

Campus.

The campus consists of a wooded tract of fifteen acres on the hills to the south of the Fox River, a most favorable situation for the college. An historic interest attaches to the campus in the presence here of several large Indian effigy mounds and an Indian cornfield.

Equipment.

Carroll College is well provided with the equipment necessary for the work of a progressive college.

Plans have been made for a consistent and harmonious group of buildings, four of which have been erected and are now occupied. These are all handsome and substantial structures of stone. They are heated from a central steam plant and lighted by gas and electricity.

Voorhees Hall.

Of this group the central building is Voorhees Hall, completed in 1900. This is a substantial building of stone, beautiful

VOORHEES HALL.

in appearance and convenient in arrangement. In the basement or ground floor, are the gymnasium and bath and locker rooms for young men. The first floor contains the offices of the college, the rooms of the music department, and several recitation rooms. The library and chapel occupy the entire second floor. On the third floor are several recitation rooms and the Y. M. C. A. reading room. The building is heated by steam from the central heating plant and is lighted by electricity.

Rankin Hall of Science.

The Walter L. Rankin Hall of Science, erected in 1906 through the munificence of Mr. and Mrs. Ralph Voorhees, is devoted principally to the laboratories and recitation rooms of the departments of Chemistry, Biology, Geology and Physics. The edifice is three stories in height with a high basement, making substantially four stories. It has a south frontage of 132 feet and is 53 feet deep. It is constructed of Waukesha limestone and is covered with a red tile roof. The construction is such that the building is well protected against fire. All of the rooms are well lighted, ventilated, and heated. The departments of Chemistry and Physics occupy the first floor and a portion of the basement. The departments of Biology and Geology occupy the second floor. The third floor contains the museum and two halls for literary societies.

Chemical Laboratories.

The chemical laboratories are four in number: a laboratory of general chemistry, a laboratory of analytical and organic chemistry, a laboratory for water analysis, and a private laboratory for the instructor in charge. All of these laboratories are located on the first floor of Rankin Hall of Science excepting the laboratory for water analysis, which is located in the well lighted basement. Besides these laboratories there are a dark room in the basement for the storage of acids and combustible and volatile chemicals, a general supply and store room on the first floor, and a balance room. The balance room opens into the laboratory of analytical chemistry and is well supplied with balances of the best makes.

The equipment of the laboratory of general chemistry is of the most modern and approved construction. It includes reagent shelves, balance shelves, air blast, and individual working desks for sixty students. These desks are provided with drawers, lockers, gas, water, and special ventilating tubes. The ventilation of the laboratory is unexcelled. Pipes are carried from each desk to a fifty-inch steel-plate fan in the basement. The fan is driven by an electric motor and discharges into a special flue. Each desk is furnished with a complete set of apparatus, and the laboratory is well supplied with balances, chemicals and general apparatus for a thorough course in general chemistry.

The laboratory of analytical chemistry is equipped with desks for thirty-six students. It is supplied with reagent shelves, air blast, draft-chamber and the best apparatus for accurate analytical work. The draft-chamber is connected with the exhaust fan. The laboratory opens into a balance room which contains Sartorius and Becker balances.

The laboratory for water analysis contains desks for twelve students. It is provided with chemicals and apparatus needed for mineral and sanitary water analysis. The laboratory is located in the basement on the south side and is well lighted.

The store room is well supplied with refined chemicals and apparatus from the best German manufacturers. The store room is open at stated periods for the purpose of supplying students with apparatus which is needed for special experiments.

A preparation room which is equipped with chemicals, minerals, technical products, and lecture apparatus for use in the courses in experimental lectures, opens into the lecture room. The lecture table is supplied with gas, water, the electric current, and a fuming chamber connected with the exhaust fan.

Mineralogical Laboratory.

The laboratory is equipped with several hundred hand specimens of minerals and crystals for work in descriptive mineralogy. The equipment also includes celluloid and wooden models of crystals and goniometers for the study of crystallography. The necessary apparatus, reagents and minerals in bulk are provided for blow pipe analysis.

Physical Laboratories.

The lecture room and laboratories of the Department of Physics occupy the west end of the first floor, and a portion of the basement, of the Rankin Hall of Science.

The laboratory of general physics is 53x24 feet, with a south, west, and north exposure. It is well lighted and is provided with shades of special construction for darkening the room at any time. It contains two large wall cases, which are well supplied with apparatus for use in the study of mechanics, heat, sound, light, and electricity. The laboratory contains an instructor's table and tables for forty students working at one time. These tables are supplied with gas and water, and with electric connections with the large storage battery located in the basement. An office and store room open into this laboratory.

The lecture room is a well lighted room with a south exposure. This also opens into the office and store room. The lecture room has seats for fifty students and is provided with a lecture table supplied with gas, water, storage battery connections, and direct and alternating current. The room can be darkened at any time, and is provided with a heliostat, stereopticon, and screen. The store room adjoining the lecture room is well supplied with apparatus for class demonstration and illustrated lectures.

In the basement there is a laboratory for advanced work in magnetism and electricity. In addition to a new collection of measuring instruments and a large storage battery there are five dynamos and motors, illustrating both direct and alternating current types of machines. The laboratories are connected with the city electric plant.

Biological Laboratories.

The laboratories for biology occupy the west end of the second floor of Rankin Hall of Science. The laboratory for general biology is a large, well lighted room with desks and lockers for thirty pupils working at one time. There are two microscope cases with lockers for twenty-six microscopes and cupboards for other supplies. Adjoining this laboratory, is a preparation and general supply room, where imbedding and sectioning may be done. There is an advanced biological laboratory equipped with

desks, lockers for eighteen microscopes, and cupboards for other supplies. Just off from this is a dark-room fitted for all kinds of photographic work. It is used also for experiments in plant physiology. A lecture room, accomodating twenty-four students, is fitted with a steropticon and screen and can be darkened at any time.

The equipment of these laboratories includes, in addition to the fixtures already referred to, twenty-eight compound microscopes, twenty-eight dissecting microscopes, microtomes for all kinds of sectioning work, including a Minot automatic rotary microtome of the latest model, a sliding microtome of the latest type, drying ovens, paraffin baths, steam sterilizer, camera lucida, stage and eye-piece micrometers, injecting apparatus, animal cages, collecting cases, gas pressure regulator, thermo-regulators, balances, and a collection of histological slides of different plant and animal tissues. Glassware, stains, and reagents are provided for microscopical, histological, and general laboratory work. A laboratory for general bacteriology, accomodating ten students, has been equipped within the last year.

This equipment is supplemented by some 1750 lantern slides, over 4,000 microscope slides, a laboratory camera, a lantern-slide camera, and a set of micrographic and micro-projection lenses, belonging to the instructor in charge of the department.

The museum, which is more fully described elsewhere, contains collections of insects, woods, shells, eggs, stuffed birds, and pressed plants, which are much used for illustration. A Mountjoy Natural History Chart with colored plates of birds and other animals also belongs to the department.

Geological Laboratory.

This laboratory occupies the east end of the second floor of Rankin Hall of Science. The equipment includes maps, charts, globes, and rock, mineral, and fossil specimens. Among these are thirty-five folios of the Geological Atlas of the United States; the Topographical Atlas of the United States; the Geological Atlas of Wisconsin; the Daily Weather Maps; and a collection of fifteen hundred rocks, minerals, and fossils.

A voluntary observer's station in connection with the United States Weather Bureau has been established recently at Carroll

College under charge of this department. For this work the government has furnished an instrument shelter, maximum and minimum thermometer, and a rain gauge. These are used for meteorological study.

Museum.

The museum now contains the following collections:—

A collection of mounted birds, nearly all native in Wisconsin, the gift of Mr. James Miller of Shawano, Wis.

A collection of birds' eggs, a gift from Mr. T. W. Haight.

The Park Herbarium, presented by Mr. Frank Park, and containing about a thousand pressed and mounted specimens.

A collection of native Wisconsin woods mounted in a special case, a gift from Mr. Frank Park.

A collection of several hundred varieties of shells, presented by Mrs. S. M. Quaw of Wausau, and others.

About fifteen hundred specimens of rocks, minerals and fossils.

A considerable collection of Indian relics.

A number of mounted vertebrates.

About fifty placques of mounted insects, showing habits and life histories.

These collections are used for class room illustration as well as for display. It is the purpose to add to the museum material each year as rapidly as possible. Either gifts or loans of valuable collections will be appreciated.

Library.

Voorhees Library of Carroll College is supported by an income from the sum of twenty thousand dollars given for the endowment of the library by Mr. and Mrs. Ralph Voorhees of New Jersey, and by special appropriations. The books are carefully selected with special reference to the needs of the several departments. They are catalogued and arranged according to the Dewey system of classification. The collection includes over one thousand bound volumes of leading periodicals which are of value in reference work through the aid of "Poole's Index" and "Reader's Guide to Periodical Literature." These files will be

completed as soon as possible. The library is well supplied with standard works of reference. Reserve shelves are provided on which are placed books for special readings assigned by the various professors.

The reading-room is a large well lighted room, tastefully decorated, and furnished in mission style. Reading tables are abundantly supplied with daily and weekly papers, current magazines, literary reviews, and scientific journals.

The library is open for reading and study from 9 A. M. to 5 P. M. on recitation days and from 9 to 12 A. M. on Saturdays. Students have free access to the shelves and are permitted to draw books by complying with customary library restrictions. In the preparation of orations and debates the facilities of our library may be supplemented by those of the very complete public library of Milwaukee and of the Carnegie Library of Waukesha to both of which our students have access.

Elizabeth Voorhees Dormitory for Women.

This new building is the gift of Mr. and Mrs. Ralph Voorhees, and, at the request of her husband, is named in honor of Mrs. Voorhees. It is a model of beauty and architectural skill. It was planned after a careful study of the most modern dormitories elsewhere, and in comfort and convenience can not be surpassed. Like the other new buildings it is of the famous Waukesha limestone. Each floor has spacious halls and is amply supplied with lavatory facilities, and the entire building is heated by steam and lighted by electricity. It is thoroughly up-to-date in all its details, with the appointments of a cultured home. The building has accommodations for eighty girls. Most of the rooms are intended for a single occupant, but some of larger size are designed for two people, and there are a few suites consisting of parlor and two bed-rooms.

The dining room is large and cheery, and will accomodate one hundred and sixty persons. It is practically a college commons, many of the young men taking their meals there, a separate entrance and waiting-room being provided. On the first floor of the dormitory is a large reception room with parlor adjoining, and suites of apartments for the dean and matron.

ELIZABETH VOORHEES DORMITORY.

The domestic department is superintended by a competent, experienced matron. The Dean of Women presides over the social life and is responsible for the physical and moral welfare of the young women in the home. The dean and the matron are both cultured Christian women who have had long experience in dealing with girls and who respond quickly to all their needs. Everything is done to surround the student with helpful, stimulating influences. There is no unnecessary or annoying surveillance; only such restraints are imposed as are needed to give the atmosphere of a well ordered home, and to help the young women to exercise self-control and to develop well balanced Christian characters.

Voorhees Cottage.

Voorhees Cottage,—like others of the college buildings, the gift of Mr. and Mrs. Ralph Voorhees,—is the residence of the President of the college and is intended as a college home, the center of the life of the college. It is at once beautiful and convenient in all of its arrangements.

Admission and Graduation.

To enter the freshman class of the college, candidates must present a certificate of graduation from an accredited high school, or pass an examination upon the subjects indicated below under the head of Requirements for Admission. Testimonials of good moral standing will be required from those who are not personally known to the authorities of the college.

Admission by Certificate.

Graduates of accredited schools will, on presentation of a certificate signed by the principal or superintendent, or other authorized officer, be given credit without examination for the work done. Blank forms of application for admission may be secured at any time by addressing the Registrar. They should be filled out and returned by September sixth.

Admission by Examination.

Candidates for admission to the freshman class coming from high schools not accredited, or having credits that are not entirely satisfactory, may have the privilege of proving themselves worthy of entrance by taking a written examination. Such examination will be appointed for Monday of registration week.

The courses outlined in the High School Manual of the State of Wisconsin represent in general the character of the work required for admission.

Requirements for Admission.

For unconditional admission to the freshman class of Carroll College, candidates must offer a total of fifteen units selected from the following list, the required units being:

English: three units.
Mathematics: three units.
History: one unit.
Science: one unit.
Foreign Language: two units.

English.

Preparation in English should be such as to accomplish two objects: (1) command of correct and clear English; (2) ability to read with accuracy, intelligence, and appreciation. Such preparation should include a thorough course in composition, and careful reading of classics included in the list of College Entrance Requirements in English.

(a) Review of English Grammar. Composition: simple narratives and descriptions. Literature: English classics. 1 unit.

(b) Composition: Narratives and descriptions based upon writer's experience and observation, or upon texts, read in class. Literature: English classics. 1 unit.

(c) Rhetoric and composition. Literature: English classics. 1 unit.

(d) Composition. Literature: History of English and American literatures. Classics. 1 unit.

Greek.

(a) Gleason's Greek Primer; Xenophon's *Anabasis,* Book I, chapters 1-5. 1 unit.

(b) Xenophon's *Anabasis* to the end of Book IV; Homer's *Iliad,* Books I-III; Prose Composition. 1 unit.

German.

(a) Bacon's *German Grammar;* Spanhoofd's *Lehrbuch der deutschen Sprache;* Storm's *Immensee;* or equivalent texts. 1 unit.

(b) Bernhardt's German Composition; Freytag's *Die Journalisten;* Goethe's *Egmont* or Schiller's *Wilhelm Tell;* sight reading of easy fiction. 1 unit.

French.

(a) Ability to read French correctly, to put simple English sentences into French, and thorough familiarity with the essentials of grammar. 1 unit.

(b) Ability to read at sight modern French of average difficulty, chosen from nineteenth century literature. This should cover about one thousand pages. 1 unit.

Latin.

(a) Elementary Latin; inflections and constructions. Translations and elementary prose. Outline of Roman History. 1 unit.

(b) Latin Grammar. Caesar's *Commentaries,* four books. Latin Prose Composition, twenty lessons. 1 unit.

(c) Cicero, five orations and selected letters. Latin Prose Composition completed. 1 unit.

(d) Vergil's *Aeneid,* six books; Mythology. 1 unit.

Mathematics.

(a) Algebra, through simple quadratic equations. Special attention should be given to the use of symbols of grouping, factoring, fractions, simple linear equations and systems of equations with careful analysis of easy problems solved by them, the solution of the quadratic equations and problems involving them, and such theorems in surds and imaginaries as are necessary in the treatment of the quadratic. 1 unit.

(b) Plane Geometry as given in Wentworth or an equivalent text, with original problems. 1 unit.

(c) Solid Geometry, including spherical, with easy original problems. ½ unit.

(d) Algebra. Review of the work of the first year with advanced work in ratio, proportion and variation, the progressions, binomial theorem, the graph and logarithms. ½ unit.

Science.

(a) Physics. One year's work in elementary physics, such as is covered by the standard elementary text-books. At least one-half of the work should consist of laboratory exercises. The laboratory note book, approved by the instructor under whom the work was done, should be presented by candidates for admission. 1 unit.

(b) Chemistry. General chemistry, recitations and laboratory work throughout the year. The ground covered should be that of the best chemistry text-books, such as Remsen's

Briefer Course. The laboratory note book, approved by the instructor under whom the work was done, should be presented. 1 unit.

(c) Zoology. One year's study of animal structures, habits, and general life history will be accepted, provided that laboratory practice and field work have formed part of the course. Laboratory drawing books must be presented. 1 unit.

(d) Botany. One year's work in structural and systematic botany. Laboratory practice and field work must form an important part of the course. At least 100 hours should be given to laboratory work, besides field work. 1 unit.

(e) Physiography. One year's work. The recitation work should be supplemented with the making and study of maps, and with field work. Tarr's *Elementary Physical Geography* or an equivalent text is suggested. A portion of the course, from one-fourth to one-half, may include Commercial Geography. 1 unit.

(c), (d) and (e) may be presented in half units.

History.

(a) Ancient History to the year 800 A. D., with special reference to Greek and Roman History. 1 unit.

(b) Mediaeval and Modern History from 800 A. D. to the present time. 1 unit.

(c) A general course in American History or English and American History. 1 unit.

(d) American History and Civics. 1 unit.

Admission to Partial Courses.

Those who are not candidates for a degree may, without examination, enter any class for which they may be found fitted, and thus pursue a partial course. If at any time such students should become candidates for a degree it will be necessary for them to satisfy the entrance requirements.

Students entering college with conditions in preparatory work must first arrange to remove such conditions. While removing

conditions students may take such college work as they may be able to carry, but to be considered in regular college standing they must take at least eleven hours of college work.

Registration.

Tuesday of the opening week of the college year is registration day. By special arrangement, registration may be made before that day. For the second semester students must register during the last week of the first semester.

On registration day the student will present himself to the Dean and Registrar of the college, who will receive his certificate or other credentials from the school last attended, and assist him in selecting his course of study for the semester. No assignment to classes shall be made, however, until the student has presented to the Dean a matriculation card signed by the acting treasurer of the college and indicating that his tuition for the semester has been provided for. Failure to register at the appointed time will subject the delinquent to a special registration fee of one dollar.

Admission to Advanced Standing.

Students presenting a certificate of honorable dismissal from other colleges and a definite statement of the amount of work done and the credit received for it may be admitted to advanced standing; but the amount of credit given for the work will depend upon the ground covered and the time spent, and is subject to the judgment of the instructors in the several departments. No college credit will be given for work done in secondary schools except on examination.

Relation to the University of Wisconsin.

An agreement has been entered into with the University of Wisconsin whereby both institutions have the same entrance requirements and the same list of accredited schools. Students who change from one institution to the other will be given the rank of sophomores or juniors, if the change is made at the end of the first or second year of their work. It is not advisable for students to make a change at the end of the junior year, but where such cases occur they will be dealt with on their individual merits.

Students who include in their full course at Carroll our pre-engineering group of studies can enter the engineering department of the University of Wisconsin and complete a technical course in two years. Those who enter before graduation will be given the same credits as students who transfer from the College of Letters and Science of the University to its engineering department.

Student Advisers.

At the beginning of the year each student is assigned to a member of the faculty who acts as his adviser, and keeps in touch with his work in all departments. The adviser may be consulted by the student in reference to anything connected with any of the varied interests of a college student's life, and will transmit to the faculty any request of the student concerning his work that requires a vote of the faculty.

Requirements for the Degree of Bachelor of Arts.

The college year is divided into two semesters. One hour of recitations or lecture per week, for one semester, is designated a unit hour. Two hours of laboratory work or two hours of prescribed physical exercise in the gymnasium are credited as one unit hour. Students are expected to take thirty-two unit hours per year during the freshman and sophomore years, two of which may be class work in physical exercise. For the degree of Bachelor of Arts a total of 124 unit hours is required, four of which may be prescribed physical exercise.

No student will be permitted during one semester to receive a credit toward graduation of more than sixteen unit hours in regular studies except by permission of the faculty, obtained in advance. Students are not allowed to receive credit for more than eighteen unit hours in any one semester.

No student shall receive a bachelor's degree until he shall have been in residence at least one year.

The 124 unit hours of recitation, lecture, and laboratory work required for graduation include:

(1) Courses required of all candidates for a degree;

(2) Courses in the major subject; and
(3) Elective courses.

1 Required Studies.

(a) English: six unit hours, to be taken in the first year.
(b) Language: sixteen unit hours for those who offer at least three years of preparation, and twenty-four unit hours for those who offer only two years of preparation.
(c) Bible: eight unit hours.
(d) Philosophy: six unit hours.
(e) Mathematics: six unit hours.
(f) History: eight unit hours.
(g) Natural Science: ten unit hours, to consist of a one-year course in either Biology, Chemistry, or Physics.

2 Major Study and Thesis.

Major study: At the beginning of the sophomore or junior year each student shall select as his major subject the work of some one department in the college. This department will determine the manner in which the work of the major shall be completed; the work required in the major (including thesis and required work) shall not be less than twenty unit hours, nor more than forty unit hours, the credit for the thesis being four hours. Any one of the following subjects may be chosen as a major: Philosophy; History; English; Biology; Mathematics; German; Latin; Chemistry; Physics.

Thesis: Candidates for a baccalaureate degree may be required to present a graduating thesis, the subject of which must be approved by the head of the department in which the candidate is doing the work represented by the thesis. The thesis must represent some phase of the student's work in his major study, and must have the character of a scholarly dissertation on the subject. The thesis must be typewritten and bound according to specifications furnished by the Librarian of the college. It must be deposited in the college library by June 1st. Before the thesis is accepted, it must be approved by the head of the department under whom the work has been done. When accepted, the thesis becomes the property of the college.

3 Electives.

All work not included under 1 and 2 is elective, but credit toward graduation shall not be given in one department for more than forty unit hours, including required work, major and electives. Not more than seventy hours credit may be received in the subjects included in any one of the following groups:

1	2	3	4
English	Biology	History	Psychology
German	Geology	Political Science	Education
Latin	Chemistry	Political Economy	Ethics
French	Mineralogy	Sociology	Philosophy
Greek	Physiology		Logic
	Physics		

Failures and Conditions.

Any course dropped without faculty consent obtained in advance shall be counted a failure in that course. When a student has failed or has been conditioned in a subject the work should be completed at as early a date as possible, and such work must take precedence over elective or advanced work. All failures and conditions must be made up before a degree will be granted.

Studies of the Freshman Year.

At the beginning of the freshman year each student shall elect, in consultation with the student adviser, one of the following groups of studies for the year's work:

I		II		IV	
English	3	English	3	English	3
Mathematics	4	Mathematics	3	Mathematics	3
German	4	Latin	5	Latin	4
History	4	History	4	Greek	5
Bible	1	Bible	1	Bible	1

IV		V		VI	
English	3	English	3	English	3
Mathematics	3	Mathematics	3	Mathematics	3
Latin	5	German	4	German	4
German	4	Chemistry	5	Biology	5
Bible	1	Bible	1	Bible	1

(The figures following the names of the subjects indicate the number of unit hours for each semester.)

The Sophomore, Junior, and Senior Years.

Each student who chooses his major subje at the beginning of the sophomore year shall outline at that time, in consultation with the head of the department in which he selects his major work, his course of study for the sophomore, junior, and senior years. The course may be changed at any time by the consent of the head of the department and the Dean.

Suggested groups of studies are outlined after the description of the courses in the various departments in which major work is offered.

Requirements for the Degree of Bachelor of Science (in Chemistry).

The requirements for admission to the Course in Chemistry are the same as they are for the courses leading to the degree of Bachelor of Arts, with the exception that elementary physics is required for entrance.

For graduation 136 unit hours of lecture, recitation, and laboratory work are required.

Four units of prescribed work in physical culture may be offered toward graduation.

The required subjects are:

Chemistry: including chemical thesis, forty-eight unit hours.

Physics: ten unit hours.

Mathematics: sixteen unit hours.

English: six unit hours.

German: twelve unit hours.

The Bible: eight unit hours.

No student may receive more than fifty-eight unit hours credit in chemistry toward graduation.

A synopsis of the Course in Chemistry may be found on page 36.

Preparation for Professional Courses.

By a careful combination of the major system and required studies, Carroll College aims to secure two results for her students: to give that breadth of culture, extent of information, and training of the mental powers needed as a basis for all lines of

ıctivity; to provide for each student the opportunity of becoming vell acquainted with some field of knowledge that will specially ›repare him for any line of professional study that he may intend ‹o take up. To this end a number of suggested groups of studies ıave been outlined and placed after the description of courses ›ffered by the various departments.

Teaching.

The departments of Education and Philosophy offer a number ›f courses which are especially adapted to the needs of those who ntend to enter the profession of teaching. The student that ex›ects to obtain a thorough preparation for teaching any particular ubject should choose that as his major study. Special teachers' raining courses are offered by the various departments of instruc‹ion. These courses, together with the professional courses offered ›y the department of Education, form an important part of the groups of studies suggested for those who desire to prepare for eaching. For these groups the student is referred to the descrip‹ion of courses in the various departments.

The school laws of Wisconsin provide that graduates of colleges whose courses of study are fully and fairly equivalent to corresponding courses in the University of Wisconsin may receive an unlimited state certificate upon recommendation of the State Board of Examiners. Acting under this provision the State Board has granted state licenses to the graduates of Carroll College. The teachers' course offered here is carefully planned to include all branches of study required by the state.

Medicine.

The departments of Biology and Chemistry offer a number of courses which will be of great value to the student who enters a medical college. The laboratories of these departments are well equipped and the courses offered are designed to give the student a working knowledge of these sciences. By proper coordination of his work here with that of the Medical Department it is possible for the student to shorten the total number of years required to obtain the degrees of Bachelor of Arts and Doctor of Medicine. Groups of studies which are suited to the needs of the pre-medical

students are described in connection with the courses in biology and chemistry.

Law.

Students who expect to study Law should do their major work in the department of History and Political Economy. The newly established department of Sociology also offers courses which will be of especial value to the student of law. For suggested groups the student who contemplates the study of Law is referred to the statement of the department of History and Political Economy.

Theology.

Students who expect to enter the ministry should have, in addition to a knowledge of the Bible, the classics, moral philosophy, psychology, literature, and history, an intelligent understanding of the laws of God as manifested in the material universe. The only way that a thorough acquaintance with nature and her laws can be obtained is by a study of the fundamental sciences. Courses in theology do not form a part of the college curriculum, but work especially adapted to the prospective student for the ministry is offered in the various departments. Groups of studies adapted to individual needs will be arranged by the head of the department under whom the student chooses to do his major work.

Business.

The conditions and tendencies in commercial activity today have made of business a profession, and, in large measure, a technical profession, requiring extensive special training. The courses offered in mathematics, history, economics, business law, commercial geography, modern languages, English, and the sciences may be so combined as to provide excellent and effective preparation for business and industry. Considerabe opportunity for practical administrative experience may be found in the conduct of the various student enterprises.

Journalism.

While the college offers no organized course in journalism, yet much of the material of such a course is provided in the work in languages, history, economics, buisness law, sociology, and English. Some opportunity for practical experience is provided in connection with the various college publications. Occasional lectures are given by men of experience in the profession.

Engineering.

Students who expect to study engineering should do their major work in mathematics and physics or pursue the Course in Chemistry. The courses offered in the college include the mathematics, the fundamental sciences, and the modern languages, which form an important part of all engineering courses. More technical courses, esepcially adapted to the engineering student, are offered in mechanical drawing, descriptive geometry, surveying, industrial chemistry, bacteriology, mineralogy, mechanics and electrical measurements.

A young man can acquire by a course in Carroll College much information that is fundamental to all engineering courses, and so materially shorten his professional course, at the same time securing that culture, general information, and mental discipline which are so essential to men who are to be agents in the betterment of society, no matter in what line of work they may engage.

Many youths incline toward one or another of the technical callings, but do not wish to decide finally and at once. They may pursue a course of study which will serve as preparation for the preferred profession, but which will also count toward a different goal if their plans should change as they grow older and become better informed.

Course in Chemistry.

The great demand for technical instruction in the college, together with the large opportunities open to the trained chemist in the manufacturing industries, has led to the establishment of a Course in Chemistry. It is the aim of the course to fit students for practical work as chemists in manufacturing establishments

or technical laboratories. Executive positions in chemical manufactories are frequently filled by chemists who show marked ability for administrative work. Graduates are fitted to enter upon graduate work in chemistry, to teach chemistry, or to take paid positions as chemists immediately upon graduation.

Suggested Outline of Course in Chemistry.

FIRST SEMESTER.

Freshman.		Sophomore.		Junior.		Senior.	
Chemistry	5	Chemistry	7	Chemistry	5	Chemistry	5
Mathematics	5	Physics	5	Mathematics	3	Bacteriology or Mechanics	5
English	3	German	2	Mineralogy	3	Chemical Thesis	2
German	4	Bible	1	French	4	Bible	1
Bible	1	Mechanical Drawing	2	Bible	1	Elective	
				Elective			

SECOND SEMESTER.

Freshman.		Sophomore.		Junior.		Senior.	
Chemistry	5	Chemistry	7	Chemistry	5	Chemistry	5
Mathematics	5	Physics	5	Mathematics	3	Chemical Thesis	2
English	3	German	2	French	4	Bible	1
German	4	Bible	1	Bible	1	Geology	5
Bible	1	Mechanical Drawing	2	Mineralogy	3	Elective	
				Elective			

University Scholarship.

The faculty of Carroll College is authorized by the University of Wisconsin to appoint each year a member of the senior class of the college to a graduate scholarship in the university. This scholarship affords the incumbent an income of $225 annually.

RANKIN HALL OF SCIENCE.

Departments of Instructions.

The work of the college is organized under the following Departments of Instruction:

Biblical Literature.
Biology.
Chemistry.
Education.
English.
Geology.
Greek.
History and Economics.
Latin.
Library Science.
Mathematics.
Modern Languages.
Philosophy.
Physics.
Public Speaking and Dramatic Literature.
Sociology.

BIBLICAL LITERATURE.

President Carrier.

The English Bible is made a text-book in the college, and the aim of this department is to familiarize the students with the Scriptures, giving them a good general knowledge of the history and teachings of the Bible. The courses are so arranged that in four years the whole Bible may be covered. Many portions of the Old and New Testaments are studied carefully, while those of seemingly less importance are passed over hurriedly. Students are encouraged to ask questions, and difficult problems are freely discussed with the purpose of encouraging more independent thought and a firmer faith. Thorough and careful study is required and credit given toward graduation. Bible truth, and not denominationalism, is the subject of study. The American Standard Revision is the text used for class room work.

In the Academy Department the Badger prizes are awarded for the best essays on subjects pursued, the assignment being made by the instructor. Any academy student may enter into this competition. The prizes are distributed as follows: first prize, four dollars; second, three dollars; third, two dollars; fourth, one dollar.

11 The Life of Christ.

The life of our Lord is so studied as to help the student to a clear and intellectual conception of Jesus as He is portrayed in the Gospels. The contents of the four Gospels are carefully studied.

First semester. One hour.

12 Apostolic History.

This is a study of the external and internal growth of the Christian Church as it is portrayed in the Acts of the Apostles. The Bible is used as the text-book.

Second semester. One hour.

13 The Books of the Pentateuch.

First and second semesters. One hour.

14 The Pauline Epistles.

Four or five of the principal epistles of Paul are studied. The date, occasion, and purpose of writing are discussed.

First semester. One hour.

15 Catholic Epistles and Revelation.

Second semester. One hour.

16 Historic Books of Old Testament.

A general survey of the history of the Hebrew people from Joshua to Nehemiah.

First semester. One hour.

17 Old Testament Prophecy.

Several prophetic books are taken up in detail in their chronological sequence. Particular attention is paid to the historic setting of these prophecies, their vital relation to the life of those to whom they were addressed, and the elements of moral and spiritual truth which they convey.

Second semester. One hour.

BIOLOGY.

PROFESSOR PLOWMAN.

The two-fold science of Biology, with its various specialized phases of medicine, surgery, sanitation, agriculture, forestry, and the like, stands in fundamental and intimate relation to all such liberal culture subjects as psychology, sociology, economics, and history, and hence it constitutes an essential element in any liberal educational scheme.

After the general course of the freshman year, the work of this department naturally diverges along the two lines of phytology and zoology. The phytological line leads to the special fields of bacteriology, sanitation, agriculture, forestry, etc. The zoological line leads to animal anatomy, physiology, hygiene, surgery, and medicine. It should not be inferred from this that the work of this department is technical and highly specialized. On the contrary, no hard and fast boundaries are recognized as limiting the student of biology, but rather is he encouraged to follow out to its ultimate answer every reasonable question pertaining to the problem of life.

The department is well housed in convenient and well-lighted rooms on the second floor of Rankin Hall. The equipment is modern, and ample for the work offered. See the description of laboratories on page 19.

Major work in this department must include at least thirty units, of which courses 11 and 12 should always form a part. The advanced work may take either the phytological or the zoological trend. For laboratory fees, see the statement of general expenses.

11 General Biology.

It is the purpose of this course to lay a broad foundation for more advanced work in the department, and at the same time to supply a well-rounded body of useful information to those students who may not choose to carry their studies farther in this line. In order to accomplish this double purpose, the work begins with the consideration of the lowest types of living things, and progresses in systematic order to the higher forms. Animals and plants are studied in parallel groups throughout the year; thus are emphasized the essential unity and the progressive divergence of the two kingdoms of life forms. The greater part of the time in this course is devoted to the study of non-flowering plants and invertebrate animals, though the higher forms are studied sufficiently to make clear their essential characteristics and their relation to the lower groups.

This work consists of three lectures and four hours of laboratory work each week, reports on reference reading, and occasional field trips. The lectures are based on the texts of Parker and Haswell, Strasburger, Warming, and others. No previous training in biology is required.

Open to all college students.

First and second semesters. Ten hours.

12 Anatomy, Histology, and Physiology of Vertebrates.

This work is specifically planned to meet the demand for a pre-medical course along rather broad zoological lines. The comparative anatomy of vertebrate animals is presented in such a way as to afford a comprehensive foundation for the accompanying study of physiology. For a similar purpose the subject of animal histology is treated in a general way.

As a basis for the lectures, reference reading, and laboratory work of the course, free use is made of such standard works as those of Gray, Flint, Klein, Dahlgren, and others. While this is definitely a pre-medical course, yet it is presented in a manner not unduly technical, and it should prove to be of great value to prospective teachers and others not preparing for the medical profession. Previous training in biological lines, though not impera-

tively required, is extremely helpful as a preparation for this course.

First and second semesters. Ten hours. Given in 1911-12, *and alternate years.*

13 Anatomy, Physiology, and Oecology of Vascular Plants.

This course is a more advanced consideration of the structure, functions, uses, and relationships of vascular plants. The agricultural and economic phases of the subject are made prominent. Large numbers of photomicrographic and other lantern slides, and an extensive collection of microscope slides and preserved materials are available for this work. The course is based upon the works of Strasburger, Vines, Detmer-Moor, Clements, and many others. Either Biology 1 or Biology 11 will serve as an introduction to this course.

Three lectures and four hours laboratory work each week, with extensive collateral reading and a considerable amount of field work.

First and second semesters. Ten hours. Given in 1910-11, *and alternate years.*

16 General Embryology and Ontogeny.

A rapid review of the processes of reproduction and development throughout the vegetable kingdom and lower groups of animals, followed by a more complete study of the embryology of vertebrate animals. Illustrated lectures, reference reading, and laboratory work. The greater part of the time in the laboratory is devoted to a study of the development of the chick. This course should be preceded by Biology 1 or Biology 11.

Three lectures and five hours laboratory work per week.

Second semester. Five hours. Given in 1910-11, *and alternate years.*

17 Biological Technique.

A practical consideration of the approved methods of collection and preservation of biological materials, and of their preparation for laboratory use; microtome technique; manipulation of the microscope; technical photography and the making of lantern

slides. Lectures and laboratory practice.

Second semester. Two hours. Given in 1911-12, *and alternate years.*

18 Conservation of Natural Resources.

A popular presentation of a subject which is rapidly forcing itself upon the attention of statesmen and political economists. This may be considered as primarily a liberal culture course, and it is especially recommended to students who are not particularly interested in biological and geological subjects. Illustrated lectures and a limited amount of reference reading.

Open to all college students.

Second semester. Two hours. Given in 1911-12, *and alternate years.*

19 Medicinal and Food Plants.

A somewhat detailed study of the structure and biological relationships of the principal plants having commercial value due to their officinal properties or to their food products. Special attention is given to the microscopical detection of adulterations and impurities. This course is planned for the general student of biology, as well as for the prospective physician and food analyst. Previous training equivalent to Biology 11 is desirable.

Three lectures and five hours laboratory work per week.

First semester. Five hours. Given in 1911-12, *and alternate years.*

20 Bacteriology and General Pathology.

The instruction in this course aims only to introduce the student to this vast and increasingly important field. A brief survey of the history of bacteriology is followed by a careful study of the general technique, together with practice in the sterilization of apparatus, preparation of media, and the cultivation and examination of a few common bacterial forms. Special attention is given to the economic and hygienic importance of bacteria, and to their

role in disease, both of plants and of animals. This course is of fundamental importance in both of the professional trends of biology, and hardly less valuable as a liberal culture study, while to the teacher of biology it is a practical necessity. Biology 11 should precede this course.

Two or three lectures and six hours of laboratory work per week.

First semester. Five hours. Given in 1910-11, *and alternate years.*

21 Organic Evolution.

A somewhat critical study of the great doctrine of Organic Evolution, together with a rapid survey of its history from Aristotle to the present. This is followed by a general inquiry into the bearing of this subject upon other fields of thought. This is primarily a liberal culture course, and it is especially recommended to prospective teachers and ministers, as well as to all students interested in biology.

Copiously illustrated lectures, reference reading, and class discussions. Either Biology 1 or Biology 11 should precede this course.

Second semester. Two hours. Given in 1910-11, *and alternate years.*

22 Thesis Course.

Students who choose their major work in the department of Biology will be required to submit a thesis, based upon original work of scientific merit, in either phytology or zoology. Ample facilities are provided for this work, in the way of equipment and standard works of reference. The special topic for this course must be selected at least one year prior to graduation, and the candidate should have had at least as much previous training in biology as is represented by courses 11, 12 or 13, and 17.

Credited according to the amount and quality of work done. A thesis must represent the work of at least four unit hours. The course, as a whole, should represent not less than five, nor more than ten, hours.

Suggested Groups with Major in Biology.

1		2		3	
Biology	30	Biology	30	Biology	30
Geology	6	Chemistry	20	Physics	10
Mathematics	6	Mathematics	6	Mathematics	6
English	6	English	6	English	6
Philosophy	6	Philosophy	6	Philosophy	15
German	16	German	16	German	16
French	8	French	8	French	8
Chemistry	15	Bible	8	Chemistry	10
Physics	10	History	8	Bible	8
Bible	8	Physics	10	History	8
History	8	Electives	6	Electives	7
Electives	5				
	124		124		124

Students who desire to pursue special lines of agriculture will find that group 1 is well adapted to their needs.

Group 2 is planned to meet the wants of pre-medical students, and group 3 for prospective teachers.

CHEMISTRY.

PROFESSOR HOPKINS.

The courses in chemistry are designed to meet the needs of three classes of students: those who wish to gain an elementary knowledge of the subject as a part of a general culture course; those who intend to study medicine or to pursue some technical application of science; those who intend to take up chemistry as a profession and so desire a broad foundation for advanced study. The subject matter of chemistry is of fundamental importance in everyday life and consequently forms an important part of a liberal education. For students intending to study medicine or engineering, a good knowledge of chemistry is necessary. Such students may well do major work in chemistry. Satisfactory completion of the courses outlined below will enable the graduate to enter universities or technical schools as a candidate for advanced degrees; to take up remunerative work as a technical or analytical chemist; or to engage in teaching chemistry. The requirements for a major in chemistry are, in addition to the thesis, thirty unit hours as a minimum. Courses 11, 12 and 13 are required of all who do major work in chemistry. Course 11 should be taken in

the freshman year. Students who enter course 11 are expected to present credit for one year's work in elementary physics.

In the courses in chemistry especial emphasis is placed upon the experimental side of the science. Students are encouraged to learn facts by experiment, to verify the statements of the text, and to become investigators from the beginning.

11 General Chemistry.

The course consists of experimental lectures together with recitations and laboratory work on the chemical elements, their compounds, and the laws underlying chemical action. *First semester*: A systematic study of the history, occurrence, preparation, properties and compounds of the non-metallic elements. The fundamental principles, laws, and theories of chemistry are discussed at length. Especial emphasis is laid upon chemical notation, nomenclature, and terminology. *Second semester*: A continuation of the work of the first semester. Tests for the common acids; the occurrence, extraction, compounds, tests and separations of the metals; classification of the elements according to the periodic law; preparation of pure salts. Accuracy, neatness and honesty in the laboratory work are insisted upon. Text: Smith's *College Chemistry*.

Four recitations, and six hours laboratory work throughout the year. Ten unit hours. M., Tu., Wed. and Th., 10:45. *Laboratory, M., Tu., and Wed.*, 2:10—4.

12 Qualitative Analysis.

A laboratory course in the detection and separation of inorganic substances. The reactions of the common metals and acids are studied. Especial attention is given in the recitations and lectures to the principles involved in the laboratory work. The theories of solution, precipitation, reduction, oxidation, mass action and chemical equilibrium are emphasized. Each student is required to identify a number of unknown substances, including simple salts, mixtures, alloys, minerals, and rare metals. A few exercises in quantitative analysis are also required. Prerequisite:

course 11, or its equivalent. Text: Prescott and Johnson, *Qualitative Analysis.*

Two recitations or lectures and twelve hours laboratory work. M., Tu., Wed., Th., 8—9:50; *Sat.,* 8—12.

First semester. Five unit hours. Given in 1911-12, *and alternate years.*

13 Elementary Quantitative Analysis.

A laboratory course involving the general methods of gravimetric and volumetric analysis, and the preparation of pure salts. Each student determines gravimetrically a number of typical elements in pure salts, alloys and minerals. The latter part of the course is devoted to volumetric analysis. The determinations are carefully selected and are designed to give the student a wide range of typical methods of quantitative manipulation. A careful study is made of acidimetry and alkalimetry and the oxidation, reduction and precipitation methods of quantitative analysis. Much attention is also given to problems in stoichiometry.

Text: Talbot, *Quantitative Chemical Analysis.*

Prerequisite: course 12.

Two recitations and twelve hours laboratory work.

Second semester. Five unit hours. Hours the same as those of course 12. *Given in* 1911-12, *and alternate years.*

14 Quantitative Analysis.

This course is intended to give a more comprehensive knowledge of quantitative methods than can be obtained in an elementary course. The work consists in the analysis of alloys, minerals, rocks, cement, fuel, iron and steel, gas, and other technical products. The laboratory work is varied to meet the needs of individual students.

Texts: Morse, Treadwell-Hall, Sutton, Fresenius.

Prerequisite: course 13.

Two lectures and twelve hours laboratory work. M., Tu., Wed., Th., 8—9:50*; Sat.,* 8—12.

First semester. Five unit hours.

15 Proximate Organic Analysis.

Sanitary and mineral analysis of water; soil analysis; food analysis; analysis of soaps, oils, paints, dairy products, fertilizers, and other technical products. The laboratory work is varied to meet individual needs.

Prerequisite: course 13.

Two lectures and twelve hours laboratory work. M., Tu., Wed., Th., 8—9:50; *Sat.* 8—12.

Second semester. Five unit hours.

16 Organic Chemistry.

Systematic study of the aliphatic and aromatic compounds of carbon. Recitations and lectures with regular written reviews. Laboratory work in preparing representative compounds of the important series of organic compounds and their identification.

Text: Holleman, *Organic Chemistry.*

Four recitations and six hours laboratory work.

First semester. Five unit hours. Given in 1910-11, *and alternate years.*

17 Theoretical and Physical Chemistry.

Lectures, recitations, laboratory work, and collateral reading. The lectures give an elementary but systematic view of the subject of physical chemistry. The following subjects are studied in the class room and laboratory: atomic and molecular weight determination, the periodic law, chemical dynamics, speed of reaction and mass relations, specific gravity determinations, melting and boiling points, solubility, Faraday's law, gas laws, electrical conductivity, phase rule, specific heat, calorimetry, spectrum analysis, and photo-chemistry.

Text: Jones, *Physical Chemistry.*

Prerequisites: courses 12, 13, and 16, and elementary physics. This course follows course 16, the two making a complete year's work. Course 16 occupies about 20 weeks and course 17 the remainder of the year.

Four lectures or recitations and six hours laboratory work.

Second semester. Five unit hours. Given in 1910-11, *and alternate years.*

18 Research Work and Thesis.

Students who make chemistry their major study or who are candidates for the degree of Bachelor of Science in Chemistry are expected to select some line of work for careful investigation. The results of the research are presented in the form of a thesis, which must conform to the requirements given on page 30. The line of work selected in course 15 should be correlated with the subject chosen for a thesis.

Credit according to the amount and quality of work done. A thesis must represent the work of at least four unit hours.

19 Teachers' Course.

This course consists of reports upon assigned topics, and recitations, conferences, and discussions of problems pertaining to the teaching of chemistry. It is pursued in connection with course 17, department of Education.

Prerequisite: courses 11, 12, 13.

Second semester, at hours to be arranged. Credit in proportion to the amount of work done.

20 Industrial Chemistry and Metallurgy.

Lectures and recitations: the chemical industries; raw materials; machinery and appliances; methods of manufacture; products, such as glass, porcelain, caustic soda, sodium carbonate, sulphur dioxide, sulphuric acid, the cyanides, gas and coke, mineral and vegetable oils, alcohol, pigments, dyes, cement, fertilizers, paper, and metals. A survey of the applications of chemistry to manufacturing industries. During the course the students make a number of trips of inspection to important manufacturing plants in Milwaukee and vicinity. These trips are personally conducted by the head of the department and form an important part of the work of the course.

Text: Thorp, *Industrial Chemistry.*

Prerequisite: courses 11, 12, and 13. It is recommended that students carry this course in connection with courses 12 and 13.

Two recitations. Tu. and Thu. at 9:50.

First and second semesters. Four unit hours. Given in 1911-12, *and alternate years.*

21 History of Chemistry.

This course is conducted as a seminar and aims at a systematic development of the historical side of the subject. Each student is expected to make reports upon assigned topics and to enter freely into discussions concerning chemical theories of the past and present. The course is open to juniors and seniors.

First and second semesters. Two unit hours.

22 Food Anaylsis.

Laboratory and lecture instruction upon the nutritive value of foods; the detection of adulterations and preservatives; analysis of plant and animal foods; fresh and preserved foods; spices, condiments, drugs, and similar products. On account of recent state and national legislation, the subject of food analysis is of great interest and importance. This course is offered to meet the needs of those students who desire a more complete knowledge of the subject than is possible from course 15. The student is expected to select certain lines of work which will prepare him for the responsible position of food chemist.

Prerequisite: course 15.

Credit according to amount and thoroughness of the work.

23 Physiological Chemistry.

A study of the foods, of digestion, of the fluids and tissues of the body, and of the urine both in health and in disease. This course is designed especially for medical students, but it is open to all who have completed course 16.

Two lectures; eight hours laboratory work. Four unit hours.

24 Toxicology.

Lectures upon the poisons, their physiological action, identification, and estimation. The laboratory work consists in the detection of poisons in foods and in the various organs of lower animals. This course is intended primarily for students of medicine.

Credit in proportion to the work done.

Suggested Groups with Major in Chemistry.

1		2		3	
Chemistry	30	Chemistry	35	Chemistry	30
Biology	10	Physics	14	Mathematics	14
Histology	5	Education and Philosophy	10	Physics	14
Bacteriology	5	Physiology	5	Philosophy	6
Physics	10	Mathematics	6	Political Economy	8
Mathematics	8	English	6	History	8
English	6	German	16	English	6
German	16	French	8	German	16
French	8	Bible	8	French	8
Thesis	4	History	8	Bible	8
Bible	8	Thesis	4	Thesis	4
Philosophy	6	Electives	4	Electives	2
History	8				
	124		124		124

Students who expect to pursue chemistry as a profession should take the Course in Chemistry. This is well adapted to the needs of the sanitary, mining, or chemical engineer. Courses 11, 12, 13, 14, 15, 16, 17, 18, and 20 are required of all students who are candidates for the degree of Bachelor of Science in Chemistry. Additional courses may be elected. A detailed outline of the Course in Chesistry is given on page 36.

Courses 19, 21, 22, 23, and 24 are offered only upon sufficient demand.

Group 1 will meet the needs of those who expect to study medicine. In order to secure the maximum value from a medical course the student should have a good knowledge of analytical and organic chemistry before entering a medical school. Courses 11, 12, 13, 16, 23, and 24 are intended to meet the needs of such students.

Group 2 is recommended for students who expect to teach chemistry or chemistry and physics.

Group 3 provides an excellent preparation for students who expect to do graduate work in chemistry.

The groups are subject to alteration.

EDUCATION.

PROFESSOR RAY.

The work in education is designed primarily to meet the needs of those students who are preparing to become teachers in the high schools or superintendents of schools in the state. To this end the work is closely related to the courses offered in the other departments of the college. For those students who elect their major in philosophy and education, the academy offers especial opportunities for observation and practice in teaching under competent supervision and criticism. The courses in education are also open to those who may desire the work for general culture and discipline. The work aims to give, on the one side, a knowledge of the development of the child and of the systems and philosophy of education; on the other, a training in the principles underlying the subject matter of education.

11 Psychology.

A study of the general field of psychology from the biological point of view. Recitations, lectures, experiments and demonstrations.

First semester. Three hours.

16 History of Education.

Education is viewed as a process of conscious adjustment. A study of the typical culture periods as revealed by the educational ideals, processes, and institutions.

First semester. Three hours.

17 Principles of Education.

The meaning of education considered from the standpoint of: (1) biology, (2) psychology, (3) neurology, (4) anthropology,

and (5) sociology. Mental development as affected by heredity and environment. Education as affecting the physical, mental, moral, and religious development of the child and the race. The varying educational aims, varying means, and educational values. The relations of the foregoing to the course of study are emphasized. The work of this course includes practice teaching in academy classes of the subjects the student is preparing to teach. The practice teaching is carried on under the direction of the head of the department in which the teaching is being done and under the supervision of the department of Education.

Second semester. Three hours.

18 Modern Educational Systems.

A comparison of the educational systems of Germany, France, England, and the United States is made, with the historical setting of each. The differences in economic, social, political, and religious conditions as affecting education are traced.

First semester. Two hours.

19 Mental Development and Child Study.

The work covers: (1) the theory of development; (2) the general characteristics of development; (3) motor development; and (4) hygiene of development, with special reference to elementary education.

First semester. Three hours.

20 School Management and Secondary School Problems.

In this course an attempt is made to analyze the school as an institution and to show the function and relative importance of the various elements of its structure. Problems are anticipated and solutions suggested and discussed. Special attention is given to the relation of the intellectual and emotional development of the period of adolescence to the high school curriculum.

One semester. Three hours.

ENGLISH.

PROFESSOR STARR.

In the courses offered by the department of English three objects are contemplated:

(1) A knowledge of the origin and development of the English language.

(2) An acquaintance with English and American literature.

(3) Proficiency in expression.

(1) The language is treated as a vital growth, a living organism, presenting successive stages of development corresponding to the successive stages in the development of the race. (2) The literature is treated as the reflection of the life of the nation, the artistic expression of the intellectual and spiritual forces that have entered into the formation of the national character and institutions. (3) From the study of masterpieces of prose and poetry it is sought to determine correct principles of expression and style, and, by the application of these, to develop the power of clear and effective expression. In general, the study of literature forms a part of the courses in composition, and practice in composition, a part of the courses in literature. Of the courses offered below, 11 and 13 are fundamental, and are intended to lay a foundation for the more advanced elective courses. In any year the particular courses to be given will be determined by the needs of the students desiring to elect work in the department.

11 Rhetoric and Composition.

A study of the forms of discourse; the preparation and criticism of written compositions; and prescribed readings in the masterpieces of English and American prose, as embodying principles of effective expression. The object in all the work is to develop the power of clear and correct expression, to cultivate the sense of literary form, and to present just critical standards. In addition, some time is given to the history of the English language; to the study of words, their etymologies and meanings; and to the subject of bibliography and reference work in the library.

First and second semesters. Three hours.

12 English Prose.

A study of the principles of expression based upon the work of the best prose writers, English and American. This course is designed to enlarge the student's acquaintance with the masterpieces of prose literature, to bring him into contact with the finer elements of style, and to promote the development and application of correct standards of criticism and expression.

First and second semesters. Two or three hours.

13 History of English Literature.

A survey of the development of the English language and of the history of English literature, with study of individual authors and representative works. Moody and Lovett's *History of English Literature,* and Manly's *English Poetry* and *English Prose,* or equivalent texts, form the basis of the work. Collateral reading and individual reports on assigned topics are required.

First and second semesters. Three hours.

14a. Old English.

Anglo-Saxon grammar and reader. Selections from old English prose and poetry. The history of the English language, and the beginning of English culture.

First semester. Three hours.

14b. Middle English.

A continuation of course 14a. This course is devoted to the literature of the fourteenth century, with special attention to the works of Chaucer and Langland, the metrical romances, and the beginning of the drama. It includes the reading of Langland's *Piers Plowman* and Chaucer's *Canterbury Tales.*

Second semester. Three hours.

15 American Literature.

A study of American literature, both prose and poetry, with special emphasis upon its relation to American life and thought,

and to contemporary English literature. Consideration of American periodical literature, including the newspaper, forms a part of this course.

First and second semesters. Two or three hours.

16 English and American Essayists.

A consideration of the development of the Essay as a definite literary form, with reading of the works of the principal essayists from the time of Bacon to the present, and attention to the development of English prose style and to literary criticism. Lectures and individual reports.

First and second semesters. Two or three hours.

17 English Poetry of the Nineteenth Century.

Lectures, together with assigned readings and reports on individual topics. A study of the principles of poetics.

First semester. Two or three hours.

18 The Novel.

A survey of the development of narrative literature, with special reference to the modern novel and the short story. Extensive reading and analysis of selected works.

Second semester. Two or three hours.

19 Contemporary Literature.

Reading, lectures, and reports in connection with the most important works in the literature of the day, including the magazines and other forms of periodical literature.

First and second semesters. One or two hours.

20 Teachers' Course.

A study of the works required for the college entrance examinations in English. Lectures, papers and class room discussions, and practice teaching. To be taken with Education 17.

For courses in Shakespeare and the Drama, see department of Dramatic Literature, page 82.

Suggested Groups with Major in English.

1		2		3		4	
English	24	English	24	English	24	English	24
Dramatic Literature	8	German	16	History	16	Latin or French	16
French or Latin	8	French or Latin	8	Dramatic Literature	8	German	16
German	16	History	8	German	16	History	8
Philosophy	6	Philosophy	6	Mathematics	6	Mathematics	6
History	8	Mathematics	6	Philosophy	15	Philosophy	6
Mathematics	6	Chemistry	10	Science	10	Science	10
Science	10	Biology	10	Bible	8	Bible	8
Bible	8	Bible	8	Electives	25	Electives	34
Electives	30	Electives	28				
	124		124		124		124

GEOLOGY.

Professor Plowman.

At present only a limited amount of work is offered in this department. The subject is considered primarily in its basic relation to the biological sciences. While no attempt is made to enter to any considerable extent upon the consideration of the more specific and technical phases of this science, yet the course aims to serve as an adequate introduction to this department of knowledge. Accordingly, only essential facts and well-established theories are considered, and breadth of view, rather than matters of detail, is the purpose of the course. In addition to its fundamental bearing upon biological problems, the work of this department should be of great value to those who may engage in the teaching of geography and physiography.

The department has quarters on the second floor of Rankin Hall, arranged conveniently for lecture and laboratory work. A large collection of government publications is available for this work. This includes twelve hundred sheets of the Topographic Atlas of the United States; the folios of the Geological Atlas of the United States; the Geological Atlas of Wisconsin; the four-volume work on the Geology of Wisconsin; the publications of the State Geological and Natural History Survey; numerous publications of the United States Geological Survey; and many other reports, maps, and charts.

11 General Geology.

This course consists of a brief general survey of the subject of earth forms, physiography, structural and dynamic geology, and the chief facts of paleontology. The work of the course includes recitations from a text-book, illustrated lectures, reports on assigned reading, section-drawing from geological maps, and laboratory and field study of typical rocks, soils, and physiographic forms.

Open to all college students.

Second semester.. Five hours.. Given in 1910-11 *and alternate years.*

GREEK.

Professor Flattery; Dr. Rogers.

The Greek department aims to cultivate an appreciation of the value of Greek literature, along with the mastery of linguistic principles. Special emphasis is placed upon sight reading so as to enable the student to read rapidly and thereby to become familiar with the particular style of the different authors. The course is so arranged and varied that topical readings can be assigned to give an insight into the scientific and philosophic spirit that conceived and formulated most of the modern theories of matter and mind, and into the ethical, social, and political conceptions by which the poets, artists, and statesmen of Greece have become the masters of a hundred generations.

11 Elementary Greek.

Grammar. Stress is placed upon the mastery of inflections, sentence constructions, and idiomatic usage, by constant oral drill and written exercises. Xenophon's *Anabasis,* with rapid collateral reading of the Greek Testament.

First and second semesters. Five hours.

12 Greek History.

A thorough study of Xenophon, Thucydides, Herodotus, with selections from Diodorus Siculus, Plutarch, Arrian, and Lucian.

First and second semesters. Four hours.

13 Greek Oratory.

A study of the style, method, and matter of orations of Lysias, Isocrates, Isaeus, Demosthenes, and Aeschines, with reference to Greek courts and jurisprudence.

First semester. Three hours.

14 Greek Poetry.

A study of Homer and Hesiod, with selections from Anacreon and Pindar and from Aeschylus, Sophocles, Euripides, and Aristophanes, with reference to poetic forms, Greek religion, and dramatic conceptions.

Second semester. Three hours.

15 Greek Science.

This course involves a careful reading of extracts from, and interpretations of, the teachings of Thales and Anaximander, of Xenophanes and Parmenides, of Heraclitus, and of Pythagoras and Democritus, with special reference to modern scientific theories.

First semester. Three hours.

16 Greek Philosophy.

This course presents a study and discussion of the teachings of Socrates, Plato, and Aristotle, with reference to philosophic technology and modern systems of philosophy.

Second semester. Three hours.

HISTORY AND ECONOMICS.

PROFESSOR GANFIELD.

History.

The study of history in a wide sense includes all departments of social life, political, economic, religious, and others. The state is, however, one of the most important features of social development; the study of political life is of very great value to citizens

of a republic. While in the following courses, special attention will be given to the political history, the aim will be also to acquaint the student carefully with the social customs and conditions, the industrial pursuits and the religious institutions. By this method it is hoped to make the study itself of great interest and to furnish the student with a better understanding of our present civilization, because many of the customs and institutions, and even the problems, of the present time have such intimate connection with the past that they can be understood only by careful study of their origin and growth. By this method it is hoped as well that the student may be helped to a more perfect and careful interpretation of the political history itself; for every department of the life of the people is influenced by every other, and the political life and practices of any period can be understood only by noting carefully the history of that people and, as well, their social, industrial, and religious institutions and the influence of these upon their politics. The presentation of the following courses in this department has then these objects: to impress a knowledge of the subject for its own sake; to broaden the view and discipline the memory, imagination, judgment, and sympathy of the student; to discover the origin and growth of both the good and the evil in our modern civilization; so carefully to interpret the past, if possible, that lessons may be drawn from it for the present: in simple, to try to interpret and understand the present civilization in the light of history; and, finally, to give a proper equipment to such students as expect to become teachers of history. The methods of instruction varying somewhat with the different courses, include text-book work, lectures, readings and taking of notes on assigned topics, preparation of theses and essays, map work, and use of original sources.

11 Constitutional, Political, and Social History of England.

This course will be divided into groups of subjects on the basis of the contents of Terry's *History of England.*

a—Teutonic England—The Era of National Foundation.

b—Feudal England—The Era of National Organization.

c—National England—The Era of National Awakening.

(a) The Social Awakening.

(b) The Religious Reformation.

(c) The Political Revolution.

d—Imperial England—The Era of National Expansion.

Special consideration will be given to such subjects as the following:

The Growth of the Parliamentary Constitution and the Rise of Cabinet Government.

The Struggle against Royal Despotism and the Rise of the Commons as a factor in Government.

The Influence and Character of the Renaissance and Reformation.

The Place and Power of Puritanism.

Motives and Methods of English Colonization.

Growth of Democracy and Parliamentary Reform.

Relation of England to Ireland and Home Rule.

Modern Industrial Development.

Gardiner: *Student's History of England.*

Terry: *A History of England.*

Readings and Sources.

First semester. Four hours. Course 14, *second semester.*

12 Survey of the Colonial, Constitutional, and Political History of America.

Epochs of American History will be used as a basis for the study, supplemented with lectures, readings, etc. Each student will be expected to do a prescribed amount of reading in reference works and to write essays and papers on selected subjects. The study will divide into two main divisions, the first down to 1789, and the second from that date to the present time.

First and second semesters. Three hours. Omitted in 1911-1912. *Alternates with course* 13. *See course* 18, *page* 63.

13 Mediaeval and Modern Europe.

European History from the Germanic Migrations which broke up the Roman Empire in the West to the Congress of Vienna. Special attention will be given in this course to the history of Germany and France, with lectures and references suf-

ficient to furnish the student with a knowledge of the rise and development of other countries of Europe and of their relation to the progress of civilization. The Religious Reformation and the French Revolution will receive very full consideration, while more than usual attention will be devoted to such other subjects as:

The Germanic Migrations and the Break-up of the Empire.
The Establishment of the Kingdom of the Franks.
Germanic Ideas of Law and Customs.
The Feudal System.
Extension of the Church; and Conflict between the Papacy and Empire.
Rise and Conquest of Mohammedism.
The Crusades.
The Growth of the French Monarchy.
The Napoleonic Wars.
The Decay and Fall of Vienna.
The Congress of Vienna.

Emerton: *Introduction to the Middle Ages.*
Robinson: *History of Western Europe.*
Seebohm: *Era of the Protestant Revolution.*
Gardiner: *French Revolution.*

First and second semesters. Four hours. Alternates with course 12.

14 History of Recent Times.

This course will begin with the rearrangement of Europe by the Congress of Vienna, and will trace the influence of the revolutionary movement and spirit on the several countries of Europe, the unification of Italy and Germany, and the development of Russia. It will involve a consideration of many interesting and perplexing questions in European life and politics, and will lead to a discovery of the conditions in the home countries whence come many immigrants to America. The course will close with a series of lectures and studies on "Europe and the World of To-day."

Europeon History from 1815 to the present day.
Seignobos: *Political History of Europe since* 1814.

Fyffe: *History of Modern Europe,* and sources.
Second semester. Four hours. Course 11, *first semester.*

15 History of Ancient Civilization.

This course will aim to do just three things: first, to furnish a thorough preparation for teaching Ancient History in High Schools; second, to help students looking forward to professional or public life to an understanding of the history of ancient people and the character of their civilization; and, finally, to aid the student of history and politics to interpret the character and contribution of the ancient nations to the general civilization of the race. The method will include: first, a survey of the history of the ancient nations; second, a study of the content and character of the ancient civilizations and of their contribution to history. In this last an effort will be made to discover and realize the significance of the Hebrew, the Grecian, and the Roman elements in European and modern civilization.

First and second semesters. Four hours.

Law and Politics.

The courses in this department have to do with states and their relations to each other; with governments, their forms and workings and institutions; and with related subjects. The work aims to cultivate breadth of view and sound thinking on governmental and political questions, to promote good citizenship, to furnish a preparation for the study of law and for the teaching of civil government, and to provide a training which shall be helpful and useful to those who may enter a business career or professional life. The courses in history are arranged as a preparation for the work in this department.

16 International Law.

This course will afford a careful study of the laws of war, peace, and neutrality, together with a consideration of the proposed plans of arbitration. Particular attention will be given to cases in which the United States has been directly interested, and

the students will frequently be referred to such cases as are found in Scott's *Cases on International Law.* Attention will also be directed to the related subject of diplomacy and to the place and power of America in the affairs of states.

Woolsey: *International Law.*

Lawrence: *Principles of International Law.*

One semester. Four hours.

17 Administrative and Business Law.

The course does not aim to fit the student to take an examination at the bar or to be his own lawyer; but rather to furnish a fair acquaintance with those legal principles and ideas which are involved in ordinary business affairs, and thereby to furnish him with such useful information as will enable him to know when he ought to consult a lawyer in order to avoid business pitfalls. Some of the subjects considered will be the following: Contracts; Agency; Acquisition of Property and Transfer of Same; Wills; Deeds; Bankruptcy and Insolvency; Insurance; Negotiable Paper; Partenership; Stock-Companies; Corporations; Common Carriers; Domestic Relations and Wrongs.

Voigt: *The Business Laws of Wisconsin.*

One semester. Four hours.

18 American Government and Politics.

This course will be given one hour per week and will continue throughout the year. It will be offered in connection with the study of American History, course 12. The aim will be to consider during the first few weeks "the development of the State, its several governmental agencies and activities." This will be followed by a general study of the American Government having special reference to the sources and development of the federal constitution, the state constitutions, the organization and working of our federal, state, and municipal governments, with allied political and social agencies.

Dealey: *The Development of the State.*

Beard: *American Government and Politics.*

Political Economy.

19 General Course.

This will consist of recitations with frequent written and oral tests, and of occasional lectures with assigned readings from standard authorities. The aim will be to give a thorough drill on the fundamental principles of the science. In addition, the student will be expected to prepare one or more papers on such subjects as: Land and Rent, Protection and Reciprocity, Labor and Wages, Enterprise and Profits, or other subjects of equal importance.

During the second half of the year special attention will be devoted to such subjects as: Modern Industrialism; The Modern Distributive Processes, and problems arising therefrom.

Fetter: *The Principles of Economics.*
McVey: *Modern Industrialism.*
Meade: *Trust Finance.*

First and second semesters. Four hours. Omitted in 1911-12.

20 Descriptive Political Economy.

a—Money, Bimetallism, and Banking.
b—Taxation, Transportation, and Socialism.

This course will consist of one semester of study on each of the series of subjects under a and b above.

In the series a the class will use:—

Scott: *Money and Banking.*
Dunbar: *The Theory and History of Banking.*
Laughlin: *History of Bimetallism in the United States.*

In the series b the class will use:—

Seligman: *Essays in Taxation.*
Johnson: *American Railway Transportation.*
Ely: *Socialism and Social Reform.*

The object of presenting these several subjects is to give the student a larger opportunity to study these very important and practical subjects that can be furnished in the single year allotted to the general course, and, at the same time, not to devote so much

time or attention to any one subject that the student will be compelled to omit others entirely.

First and second semesters. Four hours.

21 Commercial Geography.

Adam's *Commercial Geography* is used as a text and forms the basis for this course. This is supplemented by the study of assigned references in government reports, and the making of charts, tables, maps, and diagrams. The aim of the course is twofold: first, to have the student secure the valuable information afforded by the study; second, to enable him to make independent study and investigation of government publications and others of similar character, in order that he may be able to make use of such publications on his own account.

One semester. Four hours.

One year of work in Politics or in Practical Sociology may be classed with the work in Economics by students seeking to do major work in this department.

The student should plan to take courses 12 and 18, and course 13 in freshman and sophomore years, and courses 11 and 14 and course 15 in junior and senior years.

Suggested Groups with Major in History.

1		2		3		4	
History	32	History	24	History	24	History	24
Philosophy	12	Sociology	16	English	16	Political Economy	16
Mathematics	6	English	12	Mathematics	6	Sociology	8
Biology	10	Mathematics	6	Philosophy	15	English	6
Chemistry	10	Philosophy	12	Biology	10	Mathematics	6
German	16	Science	10	Chemistry	10	Philosophy	6
Latin or French	8	German	16	German	16	Science	10
English	6	Latin or French	8	Latin or French	8	German	16
Bible	8	Bible	8	Bible	8	Latin or French	8
Electives	16	Electives	12	Electives	11	Bible	8
						Electives	16
	124		124		124		124

Groups 1 and 2 are especially adapted to the needs of those who contemplate the study of law.

Group 3 is designed to meet the needs of those who may desire to prepare to teach History and English in the High Schools.

LATIN.

PROFESSOR THEISS.

The aim of the courses in this department is to give the student a clear conception of the genius of the Latin language, an accurate knowledge of its form and structure, and the ability to read its masterpieces with intelligent appreciation. The work involves and cultivates also familiarity with the essential facts and lessons of Roman history, the characteristics of Latin literature, and the conditions prevailing in Roman public and private life.

11 Livy and Tacitus.

Livy: Selections from Books 1, 21, 22. Special points of emphasis: grammatical construction, the Roman monarchy, the rise and growth of Roman institutions, the period of the Punic wars. Tacitus: *Germania.* Review of grammar, syllabus of Latin constructions, oral and written exercises in Latin composition.

First semester. Four hours.

12 Cicero and Ovid.

Cicero: *De Senectute* and *De Amicitia.* Careful tracing of all historical allusions. Outline of Roman philosophy. Selections from *Metamorphoses* of Ovid for rapid reading. Studies in Roman history and Roman life.

Second semester. Four hours.

13 Horace.

Four books of the *Odes. Carmen Saeculare.* Selections from the *Satires.*

First semester. Three hours.

14 Horace and Tacitus.

Selections from the *Epistles* of Horace and the *Annals* of Tacitus.

Second semester. Three hours.

15 Roman Correspondence.

Selected letters of Cicero and of Pliny the Younger.
First semester. Two hours.

16 Roman Comedy.

Selected plays of Plautus and Terence.
Second semester. Two hours.

17 Seneca.

Tragedies.
First semester. Two hours

18 Juvenal.

Satires.
Second semester. Two hours.

19. Lucretius.

De Natura Rerum. Parts of Books 1 and 2.
Second semester. Two hours. Alternates with course 18.

20 Latin Prose.

Advanced Composition.
First semester. One hour.

21 Latin Literature.

Lectures and text-book study.
Second semester. One hour.

22 Teachers' Course.

A special course will be given in preparation for the teaching of Latin, to be taken in connection with Education 17.

Suggested Groups with Major in Latin.

1		2		3	
Latin	20	Latin	20	Latin	20
German	16	Greek	20	History	16
French	8	French	8	French	8
English	12	English	6	English	6
Philosophy	15	Philosophy	15	German	16
History	8	History	8	Philosophy	15
Mathematics	6	Mathematics	6	Mathematics	6
Science	10	Science	10	Science	10
Bible	8	Bible	8	Bible	8
Electives	19	Electives	21	Electives	21
	124		124		124

LIBRARY SCIENCE.

PROFESSOR FLAHERTY.

11 Reference Work and Bibliography.

The aim of this course is to acquaint the students with the library, to familiarize them with books of reference, to enable them to look up subjects expeditiously, to encourage them in independent research, and to aid in the valuation of authorities, and in proper selection of material upon specific subjects. The course includes the study of reference books, indexes, periodicals, and bibliography.

Reference books are classified in groups, as dictionaries, handbooks of general information, biographical aids, quotations, statistics, etc. The books of each group are discussed and discriminated and their contents analyzed. Notes are taken by the students, and practical problems are assigned to test the value and accuracy of the notes. Through this method of work, students learn from practical experience what sources to consult for specific kinds of information. Periodicals are also classified and discussed with reference to the particular field covered by each. The study of bibliography involves practice in preparing reports on current events, and classified lists of references to books and magazine articles on special topics.

MATHEMATICS.

PROFESSOR RAY; PROFESSOR DANCEY.

The following courses in mathematics will provide material for such training and culture as may be deemed essential to every symmetrically developed mind, and will prepare the student for the various branches of science in which mathematical analysis is employed.

Students who intend to specialize in any department of applied mathematics should not omit any branch of pure mathematics which may be necessary to equip them properly for their chosen field.

11 Algebra.

Required of freshmen. The course begins with a review of various subjects of elementary algebra with stronger requirements in matters of development than is possible in a beginning course. The more advanced work may include the progressions, ratio, proportion and variation, binomial theorem, logarithms, series, probability, graphical representation, and solution of equations.

First semester. Three hours.

12 Trigonometry.

Required of freshmen. Students must have completed plane and solid, including spherical, geometry. The co-ordinates of a point and their relation to the change of angle at the point of origin are first presented, then the function of an angle and thorough drill upon the equations involving the functions, and the application of these equations to the solution of the right triangle, with and without the use of logarithms. The development of formulas used in the solution of all triangles receives especial attention.

Second semester. Three hours.

13 Algebra, Trigonometry, and Graphical Methods.

This course includes material, selected and co-ordinated, from algebra, trigonometry and analytic geometry. with drill in use of instruments and methods of computing.

Required of freshmen in engineering.

First semester. Five hours.

14 Analytic Geometry and Trigonometry.

Open to students who have had courses 11 and 12, or 13. Further work in trigonometry is given, followed by plane and solid analytic geometry.

Required of freshmen in engineering.

Second semester. Five hours.

15 Differential and Intergral Calculus.

Open to students who have had course 14.

All students who wish to go beyond the elements of the physical sciences should take this course, as the modern treatment of these subjects is based upon the calculus.

First and second semesters. Three hours.

16 Differential Equations.

Open to students who have had course 15. Recommended to those who wish to specialize in mathematics or physics.

First semester. Three hours.

17 Projective Geometry.

Second semester. Three hours.

18 Descriptive Geometry.

Problems relating to points, lines, planes, and surfaces of revolution, with practical applications. The course requires four hours of drawing, one home exercise, and one recitation per week. Text: Phillips and Millar's *Descriptive Geometry.*

Prerequisite: Mechanical Drawing.

First semester. Three unit hours.

19 Mechanical Drawing.

This course presents the elements of machine drafting. Instruction is given in the use of instruments, lettering, sketching machine parts, working drawings, tracing, and blue printing. The course is based on Phillips' plates, Adams' *Mechanical Drawing,* and Phillips' *Lettering Manual.* Students are required to provide themselves with high-grade instruments.

Six hours of drawing per week. First and second semesters. Six unit hours.

20 Surveying.

Lectures, recitations, field and office work in the theory, care, use, and adjustments of Wye and dumpy levels, hand level, compass, transit, and planimeter, platting of areas and profiles, and the making of topographic maps.

The field work includes the use of chain and tape, determination of areas with tape and transit, differential and profile leveling, running of lines and traverses, triangulation, observations on the sun and Polaris, and the use of the stadia. A careful study is made of United States land survey methods, original surveys, re-establishment of corners and boundaries, and court decisions relating thereto. Problems are assigned in farm surveying, relocation of boundaries, partition of land, etc.

Johnson's *Surveying,* Smith's *Surveying Manual,* and adjustment blue prints.

Six hours field work and two hours class work per week. First and second semesters. Six unit hours.

21 Advanced Surveying.

Topographic and hydrographic surveying, and the elements of railway curves. The field work includes the use of the plane table and stadia in making topographic surveys, a survey of the bed of Lake Pewaukee, measurement of the discharge of the Fox River, and method of locating curves. The office work includes calculations, platting and marking of maps.

Johnson's *Surveying* and Allen's *Railway Curves.*

One lecture and six hours of field and office work per week. Second semester.

22 Mechanics.

A course in applied mechanics based on Maurer's *Technical Mechanics.* Physical principles are here applied especially to engineering problems. The subject requires a thorough working knowledge of calculus and elementary mechanics.

First and second semesters. Four hours.

23 Teachers' Course.

For those who are preparing to teach any branch of mathematics a special course is offered with a credit of one unit hour, this course to be taken in connection with Education 17.

Suggested Groups with Major in Mathematics.

1		2		3	
Mathematics	20	Mathematics	20	Mathematics	20
Physics	14	History	16	Physics	14
Chemistry	15	German	16	Philosophy	15
Mineralogy	5	French	8	Chemistry	15
Geology	6	Physiology	6	Physiology	6
German	16	Biology	10	German	16
French	8	Chemistry	10	French	8
English	6	English	6	English	6
History	8	Physiology	6	Bible	8
Philosophy	6	Bible	8	History	8
Bible	8	Electives	18	Electives	8
Electives	12				
	124		124		124

Group 1 may be taken as a pre-engineering group.

Groups 2 and 3 would be suitable for those who are preparing to teach.

MINERALOGY.

PROFESSOR HOPKINS.

The work in mineralogy is especially adapted to the needs of students of chemistry and engineering.

11 Descriptive and Determinative Mineralogy.

Crystallography, including a study of crystal forms; the measurement, calculation, and projection of crystals; the physical

and chemical properties, origin, formation, decomposition, distribution, uses, and determination of the more common minerals. Laboratory practice in identifying minerals by their physical properties and by blow pipe methods. Emphasis is given to the important relation existing between crystallography and the sciences of chemistry and physics.

Text: Dana, *Mineralogy.*

Prerequisites: Chemistry 11 and 12 and Trigonometry.

First semester. Five unit hours. Given in 1910-1911, *and alternate years.*

MODERN LANGUAGES.

Professor Guild; Miss Flattery; Dr. Rogers.

In planning the courses for this department an effort has been made to combine classical training with a practical knowledge of German and French as living languages. The masterpieces of the two languages are critically studied in such a way as to lead the student to a clear appreciation of the literary development of the two nations, and to help him to interpret clearly the thought of their great writers and to understand the inner life of these peoples as revealed in their literatures. While prominence is given to modern languages as aids to the broad, liberal culture of college training, an effort is made to give such a command of the languages as will be of value in practical, everyday life. It is frequently urged against the modern language courses of American colleges that, while students may be able to read the works of the great authors, their knowledge is of no service in travel, in business life, or in independent literary work. It is the object of this department to meet this criticism by giving something practical; by training not only the eye, but the ear, and above all, the tongue.

German and French are, as far as seems advisable, the languages of the class room, and special attention is given to the true German idioms. Special courses are given for those who wish to make use of German and French in scientific research.

German.

11 Freshman German.

Schiller: *Jungfrau von Orleans;* Goethe: *Hermann und Dorothea;* Freytag: *Die Journalisten.* Memorizing of poems and study of short plays. A thorough review of grammar carried on entirely in the German language. Composition and reproductive translations throughout the year. Harris: *German Exercises.*

One day of the week is devoted entirely to German conversation and, through outlines and complete lists of questions, students are taught terms and forms used in home, business, and travel.

First and second semesters. Four hours.

12 College Beginning German.

For the benefit of students who enter college with no knowledge of German, a special class is formed which covers two years' work in one year and prepares for German 11. Only those who have maintained a high grade of scholarship in other subjects, and who are capable of the closest application will be admitted to this class.

First and second semesters. Five hours.

13 Sophomore German.

Keller's *Bilder aus der deutschen Literatur* with further study of authors. *Das Lied von der Glocke,* and other ballads and poems of famous authors. Goethe's *Faust, Part One;* Mueller's *Deutsche Liebe;* or Schiller's *Maria Stuart.* Supplementary read-reading: Freytag's *Soll und Haben;* Heine's *Harzreise;* Scheffel's *Ekkehard.*

During the year the same practical work is continued as in course 11. Jagemann's *German Prose Composition* is used for translation into German. Reproductive work and independent themes are required in this course.

First and second semesters. Four hours.

14 Rapid Reading and Conversation.

For students wishing to obtain fluency in conversation and reading, a short course is offered, to follow German 13. The

assigned texts are: Eichendorf, *Aus dem Leben eines Taugenichts.* Schiller, *Jungfrau von Orleans;* Lagerlof, *Eine Gutsgeschichte;* Niese, *Licht und Schatten.*

One semester. Three hours.

15 Lessing.

Nathan der Weise. Emilia Galotti, and selections from *Laocoon.* A study of Lessing as a critic and of his influence upon the development of a national drama. An elective course for those who have had courses 11 and 13.

First semester. Three hours. Given in alternate years with course 17.

16 Goethe.

A critical study of the different periods of Goethe's literary activity.

Second semester. Three years. Given in alternate years with course 17.

17 Contemporary German Literature.

A study of novels, lyrics, and dramas of the modern period portraying the social and political tendencies of the times.

First and second semesters. Three hours. Given in alternate years with courses 15 *and* 16.

18 Scientific German.

For students specializing in science a course of reading in current scientific German is provided. It consists of the reading of German texts and of conversations, discussions, and written work in German, the aim being to familiarize the student with technical German .

First and second semesters. Three hours.

Suggested Groups with Major in German.

German	24	German	24	German	24
French	16	Latin	16	English	18
English	12	English	6	French	8
History	8	French	8	Philosophy	15
Mathematics	6	Philosophy	15	History	8
Science	10	History	8	Mathematics	6
Philosophy	6	Mathematics	6	Science	10
Bible	8	Science	10	Bible	8
Electives	34	Bible	8	Electives	27
		Electives	23		
	124		124		124

French.

11 Elementary French.

(a)—Grammar; mastery of verbal inflections, construction of sentences, and idiomatic usages of the French language by constant oral drill and written exercises, with reading of selected stories.

First semester. Four hours.

(b)—Reading of selected intermediate French texts, with conversations, grammatical analysis in French and consecutive French composition.

Second semester. Four hours.

12 Literary French.

Reading and study of masterpieces of French classic literature, ancient and modern, including both prose and poetry. The texts read will be varied from year to year to give opportunity for additional work in the subject. All class work, oral and written, is in French.

First and second semesters. Four hours.

13 Scientific French.

This course includes an amount of reading equal to that of course 12, and the method of study is the same. The matter read and studied is intended to represent all departments of scientific study as set forth in the writings of leading French scientists.

First and second semesters. Three hours.

PHILOSOPHY.

PROFESSOR ROGERS.

The work in this department is designed to familiarize the student with the more fundamental lines of philosophic thought; to enable him to think consistently and independently on the ultimate problems of reality, the physical world and the human self, and to entertain clear ideas of the relations of these problems to his own life and conduct. To this end the courses in history of philosophy, logic, and psychology have been planned to meet the needs of those students who may elect the work for general culture and discipline, and also for those students who may wish to pursue the work with a special interest in philosophy or education. Courses 11, and either 12 or 13, are required of all students; the others are elective. A minimum of 26 unit hours, including thesis, is required of those students who elect a major in philosophy and education.

11 Psychology.

A study of the general field of psychology from the biological point of view. Recitations, lectures, experiments and demonstrations.

First semester. Three hours.
Given in the Department of Education.

12 Logic.

A study of the principles of correct reasoning, the methods of science, and an outline of the philosophical theory of thought. Recitations, lectures, and practical exercises.

Second semester. Three hours.

13 History of Ancient and Mediaeval Philosophy.

Special stress is placed upon pre-Socratic, Socratic, Platonic, and Aristotelian systems of philosophy, with full outlines and discussions of the scientico-philosophical systems.

First semester. Three hours.

14 History of Modern Philosophy.

A study of the development of philosophy from the Renaissance under Greek inspiration to the present century. The influences of religious and scientific thought and of political and economic conditions upon philosophy are closely traced.

Second semester. Three hours.

15 Ethics and Religion.

A study of the facts and problems of social life, together with a review of the principal ethical theories. The history and philosophy of religion. Recitations, lectures, and collateral reading.

First semester. Three hours.

21 Biblical Psychology.

A study of the Bible doctrine of man, the development of Christian thought and the grounds of theistic philosophy.

Second semester. Two hours.

Suggested Groups with Major in Philosophy.

Philosophy and Education	30	Philosophy	26	Philosophy	26	Philosophy	26
English	6	English	12	Biology	16	History	16
Mathematics	6	Mathematics	6	English	6	English	6
History	8	History	8	Mathematics	6	German	16
Science	10	Science	10	History	8	French or	
German	16	Latin or		German	16	Latin	8
Latin or		French	8	Chemistry	10	Bible	8
French	8	German	16	Latin or		Science	10
Bible	8	Bible	8	French	8	Mathematics	6
Electives	28	Electives	30	Bible	8	Electives	28
				Electives	20		
	124		124		124		124

PHYSICS.

PROFESSOR DANCEY.

It is the aim of the Department of Physics to present courses which will furnish preparation for technical work, for teaching, or for advanced scientific study. Physics relates itself in such a

way to other sciences and to mathematics as to make it a very desirable course for the student who expects to pursue the study of either science, mathematics, or engineering. Courses 11 and 12 are required in all engineering schools, and courses 13 and 14 are usually either required or elective. From the cultural standpoint physics should be of interest to any one who wishes to acquaint himself with the laws of nature. Recent advances in the sciences make the understanding of underlying principles especially desirable.

11 General Physics.

This is a course in the fundamental facts and principles of physical science. The work of the class room is closely correlated with that of the laboratory where the student is trained in accurate verifications and proof of physical laws as well as in the care and manipulation of apparatus.

During the first half year mechanics, heat, and sound are studied. Electricity, magnetism, and light form the subject matter during the second semester.

Duff: *A text Book of Physics.*

Recommended for sophomores in engineering and mathematics.

Two lectures, two recitations, and two laboratory periods each week. Ten unit hours.

11a. General Physics.

A course covering the same ground as course 11, but less mathematical. This course is arranged to meet the needs of students in science, medicine, and liberal arts who wish a comprehensive general course in physics in which the mathematical difficulties are reduced to a minimum. Special attention is given to correlating closely the work of the class room and the laboratory. As far as practicable the laboratory notes are prepared in the laboratory under the direction of an instructor. Lectures, recitations, and laboratory require a minimum of 8 hours per week. No mathematics is required beyond the usual requirements for college entrance.

Carhart: *College Physics.*

Open to all college students.

Two lectures, two recitations, and two laboratory periods each week. Ten unit hours.

12 Mechanics.

A theoretical and experimental study of the general principles of motion and equilibrium, forces, torques, rotational inertia, etc. The treatment is more analytical than in course 11.

Prerequisites: Physics 11 and Calculus.

Second semester. Three unit hours.

13 Electrical Measurements.

In this course the more general laws of electricity and magnetism are discussed, the practical equations employed in the laboratory are derived, and their application in electrical engineering developed. The laboratory work includes the measurement, by one or more methods, of electric currents, resistance, electro-motive forces, temperature-coefficients, capacity; a study of the magnetic properties of iron and steel; thermo-electric effects; the use of Carey Foster bridge, potentiometer, copper voltameter, etc.

Two recitations and two laboratory exercises each week.

First semester. Four unit hours.

14 Electrical Measurements.

This is a laboratory course open to students who have completed course 13. Standard experiments not undertaken in the more elementary courses are taken up here. The student is asked to work out for himself some special problem and to inform himself fully upon the literature of the subject. Each student arranges his own time for the course and receives credit corresponding to the time employed.

First and second semesters. Credit according to amount and quality of work done; not less than two nor more than five unit hours.

15 Heat.

An advanced course of lectures and laboratory work covering the general theory of heat and thermo-dynamics.

Prerequisites: Physics 11 and Calculus.

First semester. Four unit hours.

16 Light and Sound.

An advanced course of lectures and laboratory work covering the general theory of light and sound.

Second semester. Four unit hours.

17 Teachers' Course.

A study of methods of teaching physics in high schools, accompanied by laboratory work in glass blowing, soldering, and physical manipulation.

First and second semesters. Three unit hours.

Suggested Groups with Major in Physics.

1		2		3	
Physics	24	Physics	24	Physics	24
Mathematics	20	Mathematics	16	Mathematics	24
Chemistry	20	Chemistry	15	Chemistry	20
Biology	10	Biology	10	German	20
German	16	German	16	English	6
Philosophy	6	Philosophy	6	Philosophy	6
English	6	English	12	Economics	4
History	8	History	8	History	8
Bible	8	Bible	8	Bible	8
Electives	6	Electives	9	Electives	4
	124		124		124

PUBLIC SPEAKING AND DRAMATIC LITERATURE.

PROFESSOR RANKIN.

Public Speaking.

The purpose of this department is to develop power of expression, either as general culture, or as preparation for public speaking. Course 12 in argumentation and debate aims to develop clear thinking, logical reasoning, close observation, quick mastery of expression, persuasiveness, fair methods, and courtesy. In course 13 the study of great orations and the attempt to render

them involves: analysis, interpretation, dramatic sympathy, appreciation of literary style, ability to work with an audience. After studying examples of the various forms of address, application of the principles suggested is required in the preparation of original productions. Course 11 is especially adapted to the preparation for public recital work. The method of instruction is that of the Emerson College of Oratory. The system is founded upon the laws of evolution in art, and develops the sources of power through natural expression. It involves culture of the broadest kind, requiring intellectual concentration, esthetic appreciation, and power to control an audience.

Students may be secured as readers by application to the head of the department.

11 Literary Interpretation.

Impersonation, dramatic reading, expressive voice culture, responsiveness in gesture, preparation for public recitals.

First and second semesters. Four hours.

12 Argumentation and Debate.

Study of analysis, evidence, refutation, brief-drawing and presentation; practical application of these principles in debate.

Text-book: Baker and Huntington.

First and second semesters. Two hours.

13 Public Speaking.

Study of representative orators, their lives and methods; analysis of their speeches. Study of different forms of address: the eulogy, the legislative address, the after dinner speech, etc. Original work. Extempore speaking.

Text-books: Hardwick's *History of Oratory.* Baker's *Forms of Public Address.*

First and second semesters. Two hours.

14 Pulpit Oratory, Bible and Hymn Reading.

First semester. Two hours.

15 Parliamentary Law.

First semester. One hour.

16 **Voice Culture; Physical Culture.**

First and second semesters. Two hours.

Dramatic Literature.

These courses include the history of the drama, the laws of dramatic art, the analysis of plays, the study of literary style. They emphasize especially the interpretation of character, in recognition of the fact that the dramatic ability to see from another's standpoint is of fundamental importance to helpful service along all lines.

11 **Dramatic Interpretation of the Book of Job.**

Second semester. Two hours.

12 **Shakespeare.**

Thorough study of two tragedies, two comedies, and two historical plays, including: extensive character analysis founded on the text, character sketches, study of ethical problems, dramatic analysis, criticisms by prominent writers, and dramatic interpretation.

First and second semesters. Two hours.

13 **Shakespeare: Reading Course.**

The complete works of Shakespeare, his life and art. History of the drama.

Open to Seniors.

First and second semesters. Three hours.

14 **Modern Dramas.**

Browning, Ibsen, Yeats, Phillips, Rostand, Hauptman, Macterlinck, and others.

First and second semesters. Three hours.

SOCIOLOGY.

In this department lectures are given on the general subject of sociology, together with a survey of the field of social relations, with the view of establishing principles and laws. The course of

study offered aims to fit the student to make a personal study of social questions, to interpret modern social problems, and as far as possible to grapple with and understand the perplexing questions of our modern life; thus preparing him for an intelligent and responsible citizenship. By a careful study of the nature and laws of human society it is designed to prepare the student for a continuous study of society and public policy throughout life. The student is made acquainted with a number of the works of our best writers on the subject of sociology and social problems. In addition to this more theoretic and scientific study, the practical side of the subject is emphasized. Each student is enabled, through the lectures and by means of wide reading and discussions in the class room, to secure a general appreciation and understanding of modern social and civic conditions. The dependent class will be studied with special reference to slum conditions; the defective class, together with the treatment of the same; and the delinquent class, with the causes and prevention of crime. Personal acquaintance is secured with some important phases of present social and civic life by visits to charitable and penal institutions and agencies of social betterment in and about Milwaukee.

11 General Sociology.

Gidding's *Elements of Sociology*. A study of the nature and laws of human society, familiarizing the pupil with the principal forms of social organization; with the thoughts, the sympathies, the purposes, and the virtues that make society possible; with the benefits that society confers; and with the conduct that worthy membership of society requires.

First semester. Three hours.

12 Practical Sociology.

Henderson's *Social Elements*. The object of this course is to direct attention to the phenomena of human associations; to teach the methods of classifying facts of this order; to give training in the search for efficient causes; to show how to interpret social duties which arise out of conditions and relations; and especially to show the connection of order and progress with the institutions and methods of education.

Second semester. Three hours.

VOORHEES COTTAGE.

Department of Music.

The object of the department of music is to offer extensive courses in the practical and the theoretical study of all branches of the art and science of music, and to furnish instruction in such other subjects as may be considered necessary for the fullest development of the student's faculties, preparatory to the pursuit of music as a profession. It provides also for the study of music as an adjunct to general culture or as an accomplishment.

Instruction is offered in piano, voice, organ, violin, mandolin, guitar, and in history of music, harmony, counter-point, composition, musical form and analysis, and methods in public school music. Special arrangements are made for students not wishing to take up the literary work required for the degree of Bachelor of Music, or desiring to devote themselves more especially to the study of music with little or no collateral work but with a view of graduation either in the teachers' course or graduation class. However, it is expected that boarding students will take some literary studies. Students taking advanced work in music may be allowed eight units towards their A. B. degree.

Advantages.

The advantages of instruction in a conservatory, or college of music, over private instruction are so manifold and varied and so obvious to the serious minded that merely to mention the most important will be sufficient. The musical profession, unfortunately, includes many incompetent teachers, it being a profession open to all whether properly qualified or not. The faculty of the music department of a college is chosen with special reference to the fitness and ability of its members as teachers and artists; it would not be in the interest of such an institution to sacrifice its reputation by employing other than capable and expert teachers. Theory and practice should be united in the successful study of music. It is possible to secure good instruction from private teachers provided the best are selected; still it is only a conservatory with carefully chosen specialists in every department that can offer to

the student the facilities necessary for securing a complete equipment as a musician and give him the necessary preparation for successful artistic work as teacher or virtuoso. Again, the atmosphere of a conservatory is in itself stimulating. The broadening and inspiring influence of a good college is inimical to the limited culture and narrow horizons to be avoided by music students of ambition and high ideals. A conservatory cannot fail to create ambition and self reliance among its students. By observation of the attainments of those who have acquired a higher degree of proficiency, the student is inspired to greater effort, his forces are directed along right lines, and his perceptive and critical faculties are sharpened. Confidence and self-control are acquired by frequent performances before others, and the student is surrounded by influences helpful to the cultivation of a refined musical taste.

Recitals.

Frequent recitals are given by members of the faculty and the students, the latter being thus enabled not only to cultivate their musical taste by hearing the best music interpreted by competent artists, but also to develop to the fullest extent their own ability for public performance. The close proximity of Carroll College to Milwaukee gives to the students the advantages of living in a musical center.

PIANO.

PROFESSOR SHEPARD; MISS WILLSON.

Careful attention is given to the playing of every conservatory pupil at whatever age he or she may enter the institution. The most approved and modern methods are sought out and utilized in developing the student's capabilities, talents, and individuality. The utmost care is given to the development of a good touch, a sensitive ear, rhythmical accuracy and stability, and a proper understanding of musical phrasing and expression. The scientific principles underlying the technical methods of the modern pianist are fully explained and applied. While the standard classical composers are drawn upon for the greater part

of the piano curriculum, the more modern romantic school is by no means neglected. The conservatory recognizes the fact that pianists of the present day should be versatile and many-sided in their artistic attainments, and to this end the piano course is planned from its most elementary stage. The method of instruction is based principally upon private lessons. The best results are obtained only by individual attention to the needs and by careful study of the artistic, mental, and physical capacity of each pupil.

During the last year, students in the teachers' course will pursue the studies having a direct bearing on the best methods of imparting musical knowledge, and will survey in a general and systematic way the materials for musical education from the beginning to the attainment of a certain degree of proficiency. In order to make the instruction given in this department thoroughly practical, pupils or various grades are utilized, thus affording the normal students the great advantage of doing actual teaching under the supervision of the experienced master.

Preparatory School.

Hand culture and gymnastic exercises to secure muscular control of arm, wrist and fingers. Foundation technical exercises based on the Leschetizky system for the cultivating of the touch and for the formations of the hand and preparation for the proper execution of scales, arpeggios, and octaves.

Etudes: Loeschhorn, Gurlitt, Herz, Kullak, Pischna, Krause.
Etudes, Op. 45 and 46: Heller.
Studies on Touch: Wieck.
Sonatinas: Clementi, Dussek and Kuhlau.
Sonatas: Haydn and Mozart.
Classic and modern compositions.

Teachers' Certificate Class.

Advanced technical studies, scales, arpeggios, broken chords, octaves.

Technical Studies: Pischna.

Studies in Velocity and *The Art of Finger Dexterity*: Czerny.
Two and Three-Voiced Inventions: Bach.
Octave Studies: Kullak.
Etudes: Cramer.
Sonatas and Pieces: Haydn, Mozart, Beethoven, Handel, Weber, Schubert, Schumann, Mendelssohn, Chopin, and compositions by modern composers.
Sight playing and ensemble class work.

Graduating Class.

Technical Studies: Phillip.
Gradus ad Parnassum: Clementi.
English Suites and Well-Tempered Clavichord: Bach.
Etudes: Chopin, Liszt, Rubenstein, Henselt, Moszkowski, etc.
Pieces and Concertos: Beethoven, Chopin, Schumann, Brahms, Saint-Saens, Liszt, etc.
Accompanying; sight playing; ensemble class work.

Post Graduate or Artists' Class.

The artist school is especially designed for students who having gained a theoretical knowledge, thorough and fundamental, and technical ability, who are able to study the greatest works by classic and modern composers and who desire to reach a higher standard of excellence as artists. The intellectual and other artistic requirements are considerably greater than those for graduation. One object in this course is to provide the student artist with a varied repertoire suited to his musical individuality and to his needs as a public performer.

ORGAN.

PROFESSOR SHEPARD.

Preparatory School.

Students must complete the preparatory school of the piano course before admission is granted to the organ school.

Lemmen's *Organ School;* Nilson's *Pedal studies;* Guilmant's *Practical Organist;* and smaller compositions for the church. The acquiring of an organ touch, both legato and staccato playing, and a systematic course of pedal playing. Choir accompanying and such work in improvisation and modulation as is essential to the ordinary church organist.

Intermediate Class.

Preludes, Fugues, and *Choral Vorspiele* of Bach. Easier *Sonatas* of German and French schools. Church and concert music of all countries. Improvisation in the various forms and the playing of elaborate services, including the arrangement of piano accompaniments for the organ and the reading at sight of vocal scores. A comparative study of the organ and organ music of all countries, with illustrations. Theoretical harmony and analysis and ear training. Lectures on the history and construction of the organ in addition to the regular lectures on music and history.

Graduating Class.

The greatest sonatas and symphonies of all schools; the greater works of Bach and Liszt and a study of the early compositions for organ and concertos with orchestral accompaniment. Theoretical counterpoint and canon; analysis of sonatas and fugues.

VOICE.

PROFESSOR BUSHNELL.

The course of study in this department includes:

(1) A thorough study of the essential principles of voice production and vocal technic, consisting of the correct use of breath, intonation, legato, accent, phasing, and enunciation.

(2) A systematic study of the best vocal compositions, including works of the Italian, French, German, and English composers.

Careful attention is paid to the individual needs of each student, the best of the Italian and German methods being used. The purpose is to develop, with the control of the voice, beautiful tone and an intelligent and artistic style of interpretation.

It is impossible to give a specified course of study, as the course varies more or less for each student. The outline below, however, indicates in a general way, the character and extent of work given.

First Year.

Placing of tone; Resonance; Breathing; Phrasing; *Studies;* Sieber; Concone.

Second Year.

Technical work continued. Works of the best German, French, Italian, and English composers. Careful attention is paid to the interpretation of all songs studied.

Third Year.

Songs of Franz, Schubert, Schumann, Brahms, and others.

Fourth Year.

Study of the Oratorio and Opera.

Theory of Music.

PROFESSOR SHEPARD.

11 Harmony.

Elementary course. Music notation, knowledge and use of the various clefs, the principle of transposition; keys, scales, signatures, intervals, triads and their inversions, chords of the seventh, and harmonization of melodies and figured basses.

First and second semesters. One or two hours.

12 Harmony.

Advanced course. Study of chord relationships, and progressions, modulation, altered chords, enharmonic changes, suspension,

ornamental tones, organ point, melodic figuration and accompaniment. The work is done through the harmonization of melodies and figured basses.

First and second semesters. One or two hours.

13 Simple Counterpoint.

Supplying two, three, or more additional voices in the five orders of counterpoint to choral melodies and other canti firmi.

First and second semesters. One or two hours.

14 Double Counterpoint.

Double counterpoint in three, four, or more parts

First and second semesters. One or two hours.

15 Canon and Fugue.

The study and writing of canons in the various intervals, and of fugues in three and four voices, with careful study of the works of Bach and other contrapuntal masters.

16 Musical Form and Analysis.

This course treats of the analysis of the smaller song forms, variations, dance forms, masses, concertos, sonatas and fugues.

History of Music.

The department lays special stress upon this branch of musical education. The evolution of this wonderful art, from its crudest to its most perfect forms is carefully traced, and all phases are treated in this interesting subject. The music course requires one year's work in musical history. The class lessons are held twice a week, and two credits per semester are given for this work. The work is taken for the most part from Matthew's *History of Music.* During the second semester, when the lives of the composers are studied, and the growth of opera and orchestral music, a great number of other excellent works are used. The college library possesses a large number of suitable reference

books for the pursuit of this study. It is recommended to others, besides those taking only a musical course, as a delightful study, and a most profitable one in that it provides an opportunity to know more about the growth and progress of this important art.

Other Music.

Instruction is given on other instruments, such as violin, guitar, and mandolin.

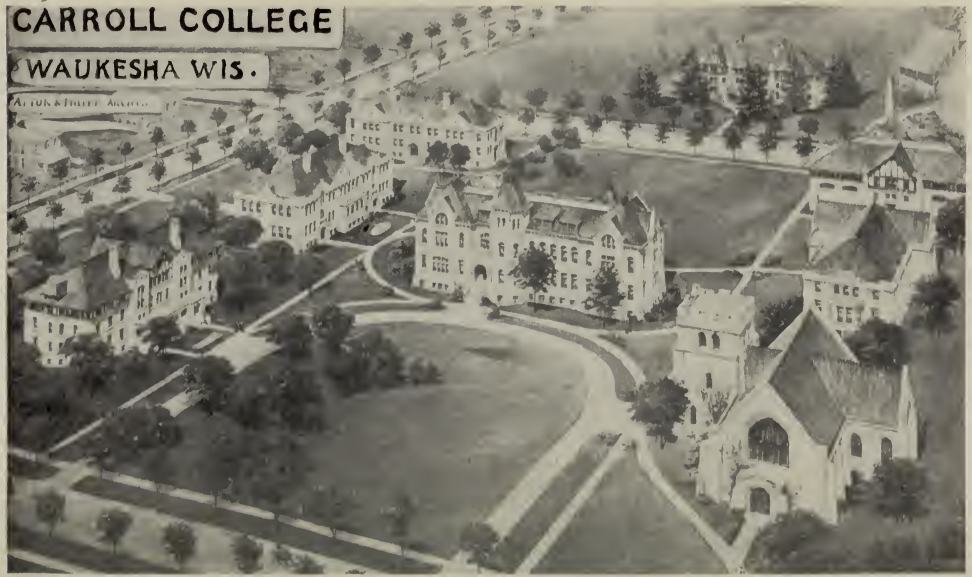
General music work is open to all students, as well as classes for beginners and advanced students in chorus work.

There are a Men's Glee Club and a Women's Glee Club under the direction of Miss Bushnell, and an Orchestra and Mandolin Club directed by Miss Willson.

Public recitals are occasionally given.

Schedule of Expenses.

	For a semester of 18 weeks.
Pianoforte, 18 one-hour lessons (Mr. Shepard)	$54.00
Pianoforte, 18 half-hour lessons (Mr. Shepard)	27.00
Pianoforte, 36 half-hour lessons (Mr. Shepard and Miss Willson alternating)	40.50
Pianoforte, 18 half-hour lessons (Miss Willson)	13.50
Vocal lessons, 18 half-hour lessons	27.00
Vocal lessons, 36 half-hour lessons	40.50
Vocal lessons, 3 in class, 18 lessons	18.00
Piano practice, 1 hour per day	4.00
Musical Theory, the same as private lessons. In classes the amount will be divided according to the number in the class.	
Lessons in mandolin and guitar, 18 lessons	$13.50



PROPOSED PLAN OF GROUNDS AND BUILDINGS.

Physical Department.

MR. BLEAMASTER, PHYSICAL DIRECTOR.

The Object of the Work.

The work of this department affords every student the means of acquiring physical health and mental vigor. It is made eminently recreative and pleasant, thus freeing the student from the constant strain of study. All students are advised to pursue regular work in the gymnasium. Credit to the amount of four unit hours will be granted for such work toward the Bachelor's degree. The institution zealously encourages all pure and healthful recreation, and gives its support and direction to all indoor and outdoor games, subordinating them, however, to their place in the college curriculum.

The Gymnasium.

Carroll College possesses a modern and well equipped gymnasium. It measures 40x73 feet, is eighteen feet in height, and is finished in Georgia pine. The gymnasium, together with the locker rooms and shower bath, occupy the ground floor of Voorhees Hall. There are windows on three sides affording sufficient sunlight, and strict attention is paid to ventilation. The inside lighting is by caged electric lights. There are two handball courts in the gymnasium, and a commodious basketball court. Above the gymnasium floor is a good running track, and a punching bag platform.

The Equipment.

The apparatus includes dumb bells, Indian clubs, bar bells, striking bags, wrist and finger machines, Swedish bars, pulley weights, horse, buck, horizontal and parallel bars, climbing ropes, traveling rings, spring board, vaulting poles, jumping standards, and all necessary apparatus for indoor athletics. In connection with the gymnasium are the bath rooms, provided with both tub

and shower baths, and with a sufficient supply of hot and cold water. Adjoining the men's bath room is the locker room, where a convenient, roomy, and well ventilated locker is provided for the use of each student. This room is the dressing room for the members of the athletic teams. Racks for bicycle storage are provided in the lower hall, with entrance from the west.

System of Exercises.

The system of exercises taught is thoroughly practical and is adapted to those who lead a sedentary life.

The work for the men is systematized as follows: in the fall term, military marching, calisthenics, stall bar, mat work, and games; in the winter term, the same work with the addition of the horse, and horizontal and parallel bars; in the spring term athletic exercises, such as jumping, pole vaulting, and running.

Two hours of gymnasium work per week are provided for all women students. The exercise consists of marching, calisthenics, free hand gymnastics, and use of wands, Indian clubs and light apparatus. During the winter season special attention is given to basket ball. The recreative feature is made prominent in all of the gymnasium work.

Competitive Indoor Sports.

A schedule of basket ball games, relay races, etc., is prepared and carried on during the season of gymnasium work. These games come at the close of the calisthenic and apparatus work of the day. This series of games is carried on by classes both of the young men and of the young women.

Outdoor Sports.

The students of the college engage in foot ball, base ball and track athletics. Carroll is a member of the conference of Northern Illinois and Wisconsin Colleges and participates each year in a number of inter-collegiate contests with neighboring colleges. Carroll College stands for clean, wholesome athletics and adheres to the spirit, as well as the letter, of the regulations adopted by

the conference colleges. While the college lends every encouragement to inter-collegiate athletics it requires that this work be subordinated to the regular work of the school. All inter-collegiate contests are under the direction of the athletic association and the athletic committee of the faculty. The foot ball and base ball teams, with their managers and captains, are responsible to the athletic association and look to it for support. No student who is deficient in any of his work will be permitted to participate in any inter-collegiate contest.

The Academy.

The purpose of the instruction provided in this department is to accommodate students who wish to prepare for college. While the work as outlined in the different departments of instruction may include the greater part of a college preparatory course, students from the public schools who seek admission are advised to offer preparation for at least third year high school work. Mature persons with parctical experience may find opportunity to reduce the time usually given to college preparation.

A diploma will be given to students who shall have met the college admission requirements and who shall have had at least one year of resident study.

In addition to the work outlined below, courses may be provided in physical, industrial, and commercial geography. A course in elementary science, involving the essentials of biology, chemistry, and physics, may also be given.

BIOLOGY.

The biological work in the academy aims primarily to present a comprehensive view of the plant and animal kingdoms in their relation to each other and to their environment. A somewhat detailed study is made of the higher groups, followed by a more rapid survey of the lower forms. While this work is useful as a preparation for Biology 11 in the college, yet it is not planned for that specific purpose, nor, indeed, is it required as a preliminary to the college work. It is intended rather to serve as a general introduction to the knowledge of living things, and to be a course fairly complete in itself.

1a. Zoology.

The work of this division is based on the text and laboratory guide by Linville and Kelly. These are supplemented by frequent class discussions, illustrated lectures, and occasional field trips. Laboratory drawings and notes are required.

Three recitations and four hours laboratory work each week. First semester.

1b. Botany.

The work of this division is based on the text by Coulter, together with a manual. Recitations and laboratory work as in zoology, with frequent illustrated lectures and work in the field.

Second semester.

ENGLISH.

1 Grammar and Composition.

Review of English Grammar. Composition: simple narratives and descriptions. Literature: classics required for college entrance.

First and second semesters.

2 Composition and Literature.

Composition based upon writer's experience and observation, or upon texts read in class. Literature: English classics.

First and second semesters.

3 Rhetoric and Literature.

Study of principles of composition. Literature: English classics. History of English and American literatures.

First and second semesters.

GERMAN.

1 German Grammar and Lessons.

Bacon: *German Grammar and Reader.* Storm: *Immensee.* Simple conversation based on practical subjects. Memorizing of German poems and idioms.

First and second semesters.

2 German Readings.

Grammar reviewed. Hillern: *Hoher als die Kirche;* Schiller: *Wilhelm Tell.*

Memorizing of poems. A very thorough course is given in composition and conversation, Bacon's *Im Vaterland* being used as a text-book.

First and second semesters.

HISTORY AND CIVICS.

The object of the courses in history will be: to interest the student in history studies; to furnish a knowledge of the facts of general history; to provide a thorough preparation for the more advanced courses in history and politics in the college; and to give the student a course of study which may lead to a better appreciation of his own times and thereby prepare for a more intelligent and active participation in the responsibilities and duties of citizenship.

1 **Ancient History.**

From the earlest times to 800 A. D.

First and second semesters.

2 **Mediaeval and Modern History.**

Europe from the death of Charlemagne to the present time.

First and second semesters.

3 **History of the United States. Civics.**

First and second semesters.

LATIN.

The methods employed involve grammatical drill, accuracy and fluency in translation, and extended work in Latin composition. Correct pronunciation with special regard to quantity is insisted on from the beginning. The life and works of each author with their historical settings, are carefully studied.

1 **Grammar and Lessons.**

Elementary Latin. Inflections and constructions. Translations and elementary prose. Outline of Roman History.

First and second semesters.

2 Caesar.

Latin Grammar. Caesar's *Commentaries,* four books. Latin prose composition, twenty lessons.

First and second semesters.

3 Cicero.

Six orations, and selected letters. Latin prose composition, completed.

First and second semesters.

4 Virgil.

Aeneid, six books; Mythology.

First and second semesters.

MATHEMATICS.

The courses in academy mathematics are prepared and conducted with a view to fit the student for entrance to college.

1 Algebra.

This course is pursued the first year and extends through Quadratic Equations. Mastery of elementary processes with accuracy and rapidity, rather than the solution of complex problems, is the aim in this introductory work.

First and second semesters.

2 Plane Geometry.

Open to students who have had course 1 or its equivalent. The fundamental propositions are demonstrated and discussed. Special attention is given to a limited number of original theorems and problems, accompanied by appropriate constructions and measurements.

First and second semesters.

3 Solid Geometry.

Open to students who have had courses 1 and 2 or their equivalent. Special attention is given to the applications of Solid Geometry to practical problems in mensuration.

First semester.

4 Algebra.

Open to students who have had course 1 and preferably 2 and 3. This is a continuation of course 1 and includes a review of some of the subjects of that course. Advanced work in ratio, proportion and variation, the progressions and logarithms is pursued. Preparation for college mathematics demands this course.

Second semester.

PHYSICS.

1 Elementary Physics.

A study of the elementary principles and phenomena of Physics, largely non-mathematical. The work consists of class room demonstrations, recitations, and laboratory work. The laboratory work and the class room work are carefully differentiated and at the same time closely correlated. In the first semester mechanics, heat and magnetism are studied; in the second semester the laws and phenomena of electricity, sound and light are discussed. The class work is based upon Millikan and Gale's *First Course in Physics;* the laboratory work includes the completion of fifty experiments, with Millikan and Gale's *Laboratory Course in Physics* as a guide. Each student has an assigned place for work in the laboratory. Neatness and accuracy in the laboratory work and clearness in the expression of the results obtained from the experiments are insisted upon. This course should be taken by all students who expect to take chemistry in the freshman year and by all students who expect to pursue advanced work in any science.

Two hours of recitation or laboratory work per day throughout the year. Five unit hours.

UNIVERSITY OF ILLINOIS
PRESIDENT'S OFFICE

PUBLIC SPEAKING AND DRAMATIC LITERATURE.

To pupils who have taken the maximum amount of work in English one credit in English will be given for a year's work in Oratory or Shakespeare.

1 Literary Interpretation.

Declamation, recitation, extemporaneous speaking, debate, voice culture, gesture. The text-book used consists of selections from the masterpieces of literature, including the Bible. In order to impress an audience with the sentiments of these great works it is necessary that the student learn to think with the authors; thus thought power and literary taste are developed, as well as larger views and sympathies.

2 Shakespeare.

Thorough study of one tragedy, one comedy, and one of the historical plays, including: extensive character analysis founded on the text; character sketches; thorough understanding of the text; dramatic analysis; memorizing passages; study of criticisms by prominent writers; dramatic interpretation. The study of Shakespeare interests the student in ethical problems, broadens his sympathies, elevates his ideals and establishes a taste for good literature.

GENERAL INFORMATION.

Student Organizations.

Several voluntary organizations among the students serve to direct into useful channels the various phases of student interest and activity.

Christian Associations.

Two very active and prosperous Christian organizations, one the Young Men's Christian Association, the other the Young Women's Christian Association, provide a very pleasant center for the religious life of the college. These associations have their prayer meetings for one-half hour at noon on Wednesdays, the young men and young women meeting in their separate halls. On Monday night is held a weekly college prayer meeting under the joint auspices of the faculty and these two associations. This meeting is frequently addressed by some member of the faculty or by one of the pastors or Christian workers of the city. These several services furnish the occasion and means of very great help and inspiration to all who attend, and they also promote a delightful Christian spirit in the college.

These societies have recently provided and furnished attractive and homelike rooms for study and reading and conference, and welcome here all students of the college.

Musical Clubs.

The four musical organizations of the college, the Men's Glee Club, the Women's Glee Club, the Mandolin Club, and the Band, supplement in a very practical way the work of the musical department of the college, and afford valuable training in chorus and orchestra work. A concert tour is made each year by the Glee and Mandolin Clubs.

Literary Societies.

Two societies for literary culture—the Aristonian and the Philomathean—provide centers and stimulus for the impulse to

independent, original literary expression. Their work consists of debates, studies of individual authors, orations, papers, book reviews, and discussion of events of present interest. They have furnished and equipped in attractive manner the halls provided for their use in the new Rankin Hall of Science. An annual debate is held between the two societies and a prize or trophy awarded to the winning society.

A debating society for young men—Athenae—provides further opportunity for work in oratory and debate.

A literary society is maintained by the students of the Academy.

A dramatic club has recently been organized by the young women in connection with the department of Dramatic Literature.

Oratorical League.

The Carroll College Oratorical League is composed of representatives of the literary societies, and has control of the local debates and oratorical contests. Two preliminary contests, and one final contest, in oratory are held each year. The winners in the final contest are the representatives of the college in the annual contest of the Wisconsin Intercollegiate Oratorical Association. The League also arranges for an annual prize debate between the literary societies of the college.

Athletic Association.

The Athletic Association represents the organized athletic interests of the college. Under its auspices the intercollegiate games in which the college participates are carried on. Detailed information of the athletic work of the college will be found in the statement of the Physical Department.

Publications.

The Carroll Echo.

For a number of years the students have edited and published a monthly paper under the name of *The Carroll Echo.* Not only has this stimulated literary production among the stu-

dents, and given happy expression to many phases of college life, but it has been a welcome visitor to homes of the alumni and other friends, and has been an effective medium of communication between the present student body and former students.

Hinakaga.

The junior class issues annually *Hinakaga,* a publication richly illustrated and representing all the varied interests of college life.

The Bulletin.

The Bulletin is issued quarterly by the faculty of the college.

Lectures.

At frequent intervals lectures are given in the college chapel by men of note and distinction in the professions and in the various departments of business activity. This arrangement affords the student the stimulus of contact with men who are leaders in thought and action.

Social Life.

The demands of young people for recreation and their need of social culture and enjoyment receive recognition and encouragement. Students are given as much liberty in social affairs as is consistent with the standard of scholarship and with the responsibility of the faculty for their welfare. Social events, in which members of the school participate, and class parties, are usually restricted to Friday and Saturday evenings, and are always under the supervision of the faculty.

Book Store.

A college book store is maintained, on the first floor of Voorhees Hall, where books and other necessary supplies may be obtained at reasonable prices.

Expenses.

College Fees.

The college year consists of 36 weeks and is divided into two semesters. Tuition bills are due in advance. No reduction is made for brief absences. If the tuition is not paid within two weeks of the beginning of the semester, $1.00 is added. The rates are as follows:

College: per year, $50.00.

Academy: per year, $40.00.

Commencement expenses for graduation:

From the College, $5.00.

From the Academy, $2.50.

The fixed concession in fees to special classes, including clergymen, has been discontinued.

Laboratory Fees.

In all laboratory courses small fees are charged to cover the cost of material used in the laboratory. The fees, per semester, are as follows:

Chemistry: $5.00.
Biology 18 and 21: $1.00.
Biology 1 and 17: $2.50.
Biology 11, 16 and 20: $4.00.
Biology 12, 13 and 19: $3.00.
Biology 22: $5.00 for entire course.
Physics: $3.00.
Mineralogy: $2.50.

An annual breakage deposit of $5.00 in Chemistry will be required of each student. This deposit, or such part of it as has not been charged against the student for breakage, will be refunded at the close of the year.

In the academy the laboratory fees per semester are as follows: Biology, $2.50; Physics, $2.50.

Laboratory fees must be paid in advance. Under no conditions will they be refunded.

Living Expenses for Men.

A very important part of the expense for students is the cost of living; therefore every effort is made to keep this as low as possible. Excellent rooms, convenient to the college, may be had at from seventy-five cents to $2.00 per week. Table board is furnished by the college at $3.25 per week, and in private families at a similar rate. Opportunities for boarding in student clubs reduce still further the possible expense.

Living Expenses for Women.

The rooms of the Elizabeth Voorhees Dormitory are single and double, or may be used en suite. Each occupant of a room has her own closet. The price of rooms, including heating and lighting, ranges from $18.50 to $31.50 per semester. The rate for table board $3.25 per week. Rooms are furnished with college cot, mattress, pillow, study chairs, dresser with mirror, wash stand, bowl and pitcher. The floors are of hard wood and students desiring rugs may furnish them. Bedding, window curtains, couch covers, table covers, napkins, and all other articles of convenience or adornment are furnished by each student.

Single rooms are 9 x 13 ft., and double rooms 12½ x 13½ ft.; windows, 38 x 64 in.; study tables, 2 x 3 ft.

Application for admission should be made early. A deposit of $5.00 is required from those engaging rooms, and a choice will be made according to such application. The deposit may be returned if the engagement is cancelled three weeks before the opening of the semester.

Opportunities for Self-Help.

There are many opportunities in the city for self-help. Most students desiring to help themselves can secure a considerable portion of their expenses during the year. Several young ladies find opportunities as helpers in homes for their board, and young men are able to find work in the homes, offices and factories of the city.

Attendance.

Students must be prompt and regular in attendance. Tardiness and absence are fatal to good work. Persistence in these habits cannot be tolerated. The authorities of the college believe that the measure of value which the student derives from his work is adequately estimated, not by written examinations alone, but also by his presence and attention in the daily class exercises. Any student, therefore, who absents himself from classes without furnishing an acceptable excuse to his instructor may expect his standing to be lowered accordingly. Repetitions of such irregularity after due warning will deprive the student of his credit.

Students are required to attend the daily chapel exercise, and a morning service on Sunday in the church of their choice, determined at their entrance.

Students absenting themselves from classes immediately preceding or immediately following any regular or appointed vacation during the school year, shall be required to take an examination in the subjects missed and to pay a fee of one dollar for the first, and fifty cents for each additional subject so missed. For each day's absence following the first a fee of one dollar shall be required. Before being admitted to examination for reinstatement each student must present to his instructor a receipt from the college treasurer indicating that the above named fees have been paid. No instructor is permitted to exempt any student from these requirements unless furnished with an excuse which has been endorsed by the faculty.

Study Hours.

Students are required to keep regular study hours, setting apart at least two hours each evening, or the equivalent of this, for home study. Social affairs are discouraged on the four evenings of the school week. Social gatherings must be reported to the President in advance and his approval secured.

Supervision.

While it is the purpose of the college to encourage self-government and to grant to students as much freedom as is con-

sistent with their best interests and with the good order of the school, yet it is deemed necessary that students should be at all times under the supervision of the faculty.

Non-resident young women are required to live in the dormitory unless special permission to live elsewhere be given by the faculty.

Whenever it becomes apparent that a student's influence is harmful to other students he will be requested by the faculty to leave the school.

Students who have not at least a fair ability to acquire knowledge, and a reasonable willingness to study, will not be allowed to remain in the school.

Examinations and Grades.

Such tests and recitation period examinations are given from time to time as instructors may think necessary. At the close of each semester, four days are set apart, on which instructors give examinations covering a part, or the whole, of the semester's work. Full reports, embracing the work of each semester, are sent to the parents for their inspection. The passing mark of the school is 70. Those who are marked between 60 and 70 are said to be "conditioned" and may have an opportunity to make up the work. Those who are marked below 60 are regarded as having failed in the work, and in most cases will need to take the work over again.

COLLEGE OF PHYSICIANS AND SURGEONS.

Wisconsin College of Physicians and Surgeons.

Milwaukee, Wis.

Medical Department of Carroll College.

The Faculty.

WILBUR O. CARRIER, A.M., D.D., PRESIDENT.
THOMAS C. PHILLIPS, S.B., M.D., DEAN.

SOLON MARKS, M.D., Emeritus Professor of Military Surgery and of Fractures and Dislocations.
GUSTAV A. KLETZSCH, M.D., Emeritus Professor of Gynecology.

Professors.

A. HAMILTON LEVINGS, M.D., Professor of Surgery and Clinical Surgery.
*URANUS O. B. WINGATE, M.D., Professor of Nervous and Mental Diseases.
HENRY A. ALBERS, A.M., M.D., Professor of Medicine.
HARRY A. SIFTON, Professor of Clinical Surgery.
LORENZO BOORSE, M.D., Professor of Pediatrics.
HENRY BLANK, M.D., Professor of Orthopedic Surgery.
THOMAS C. PHILLIPS, S.B., M.D., Professor of Ophthalmology and Otology, and Dean of the Faculty.
WILLIAM FRANCIS BECKER, M.D., Professor of Mental and Nervous Diseases.
HERMAN REINEKING, M.D., Professor of Surgery and Clinical Surgery.
FRANK E. DARLING, S.B., M.D., Professor of Bacteriology.
LOUIS F. RUSCHHAUPT, S.B., M.D., Professor of Chemistry.
JAMES D. MADISON, S.B., M.D., Professor of Medicine.
CURTIS A. EVANS, A.B., M.D., Professor of Anatomy.

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*Deceased.

E. ARMOR FLETCHER, M.D., Professor of Genito-Urinary Surgery.
GEORGE C. RUHLAND, M.D., Professor of Pathology.
MILTON M. SPITZ, M.D., Professor of Therapeutics.
OTTO H. FOERSTER, M.D., Professor of Dermatology.
C. A. KREUTZER, M.D., Professor of Gynecology.
J. HILTON SURE, M.D., Professor of Obstetrics.
MAXILLIAN A. BUSSEWITZ, A.M., M.D., Professor of Physiology.
GERHARD A. BADING, M.D., Professor of Clinical Surgery.

Associate and Clincal Professors.

MOSES J. WHITE, M.D., Clinical Professor of Mental Diseases.
GILBERT E. SEAMAN, M.D., Clinical Professor of Ophthalmology.
ALBERT WILLIAM MYERS, M.D., Associate Professor of Pediatrics.
FREDERICK C. GILLEN, M.D., Associate Professor of Medicine.
LOUIS M. WARFIELD, A.B., M.D., Associate Professor of Medicine.
ALEX KREMERS, M. D., Associate Professor of Anatomy.
ALFRED L. KASTNER, M.D., Assistant Professor of Pediatrics.

Associates.

CLARENCE ALLEN BAER, S.B., M.D., Associate in Dermatology.
FRANK E. DARLING, S.B., M.D., Associate in Obstetrics.
WILLIAM ACKERMANN, M.D., Associate in Medicine.
GEORGE R. ERNST, M.D., Associate in Medicine.

Special Lecturers.

SAMUEL W. FRENCH, A.B., M.D., Ethics, Economics and Medical History.
RALPH PEAIRS, M.D., Anaesthesia and Anaesthetics.
E. G. WURSTER, LL.B., Medical Jurisprudence.
A. B. PLOWMAN, PH.D., Eugenics.

Lecturers, Demonstrators, and Instructors.

GEO. C. RUHLAND, M.D., Lecturer on Histology.

E. ARMOR FLETCHER, M.D., Demonstrator of Anatomy and Instructor in Osteology.

SAMUEL G. HIGGINS, S.B., M.D., Lecturer on Rhinology and Laryngology.

ALEX. R. CRAVEN, S.B., Lecturer on Inorganic Chemistry.

WILLIAM S. DARLING, S.B., M.D., Assistant Demonstrator of Anatomy.

HARRY F. McBEATH, M.D., Clinical Instructor in Ophthalmology and Otology.

WM. KARZKE, M.D., Lecturer on Hygiene.

BENJAMIN F. ARMBRUSTER, A.M., M.D., Demonstrator of Operative Surgery.

WALTER T. McNAUGHTON, M.D., Instructor in Clinical Pediatrics.

GEORGE F. ZAUN, M.D., Clinical Instructor in Ophthalmology.

FRANCIS A. THOMPSON, M.D., Instructor in Clinical Medicine.

FREDERICK A. STRATTON, M.D., Assistant to the Surgical Clinic.

W. H. GOECKERMANN, M.D., Instructor in Mental Diseases.

EDWARD S. LOGE, PHAR. B., M.D., Instructor in Pharmacology.

J. FOSTER McNARY, M.D., Assistant to the Surgical Clinic.

W. C. REINEKING, A.B., M.D., Clinical Instructor and Assistant in Surgery, and Assistant Demonstrator of Anatomy.

MAX BORNSTEIN, M.D., Lecturer and Demonstrator of Anatomy and Lecturer on Embryology.

DIRK BRUINS, M.D., Assistant Demonstrator of Anatomy.

W. W. GILLESPIE, S.B., M.D., Assistant Demonstrator of Anatomy.

W. B. PODLASKY, M.D., Assistant Demonstrator of Anatomy, and Assistant in Medicine.

LUCIA HOYER, M.D., Instructor in Clinical Pediatrics.

JOHN A. BIRKL, M.D., Associate in Clinical Obstetrics.

F. S. WASILIEWSKI, M.D., Associate in Clinical Obstetrics.

J. S. JANSEN, Roentgenologist.

LOUIS FUERSTENAU, M.D., Lecturer and Demonstrator of Anatomy.
ALEX. R. CRAVEN, S.B., Registrar.

General Statement.

The Wisconsin College of Physicians and Surgeons, Medical Department of Carroll College, has been doing excellent work in the medical world for eighteen years, and has sent out a strong Alumni which includes many very able physicians and surgeons. The College is located in Milwaukee, on the corner of Fourth Street and Reservoir Avenue.

Admission.

For admission to the Medical School, a student must have, as a minimum, a four year's high school course in an accredited high school, or its equivalent. See the special catalogue of this department.

Course of Study.

The course extends through four years of eight months each. The first two years are devoted to the study of pre-medical subjects, including: anatomy, physiology, chemistry, histology, bacteriology, pathology, pharmacology, embryology, toxicology, physiological chemistry, and hygiene. The last two years are devoted to the departments of medicine and surgery.

Equipment.

The buildings and equipment are modern and adequate to the needs of a first class scientific and practical training. Milwaukee, with more than 350,000 population, furnishes abundant material for clinical teaching. The sources of this material are the College Free Dispensary, St. Joseph's Hospital, the Children's Free Hospital, the South Side Maternity Hospital, the Milwaukee County Hospital, and the Milwaukee County Hospital for the Insane. The newly equipped chinical laboratory of the County Hospital furnishes an excellent opportunity for training in clinical microscopy

Degrees.

Students taking two years of work in Carroll College, or in a college accredited by Carroll College, before entering the medical school, may at graduation receive the two degrees, A.B. and M.D.

Fees.

The medical college fees are as follows: a matriculation fee of $5.00, paid on first registration; $65.00, general fee for each semester; $2.00, microscope fee; $15.00, graduation fee; and the cost of anatomic material.

Fuller information is given in the special catalogue of this department, which may be obtained on application to the Dean or Registrar.

Wisconsin College of Dentistry.

Milwaukee, Wisconsin.

Dental Department of Carroll College.

The Faculty.

WILBUR O. CARRIER, A.M., D.D., President.
RAYMOND J. WENKER, D.D.S., Dean.

WM. C. WENDELL, D.D.S., Emeritus Professor of Operative Dentistry.
A. HAMILTON LEVINGS, M.D., Professor of Oral Surgery.
CHARLES L. BABCOCK, D.D.S., Professor of Dental History and Ethics.
RAYMOND J. WENKER, D.D.S., Professor of Oral Surgery and Orthodontia and Superintendent of the Infirmary.
HARRY G. MORTON, D.D.S., Professor of Operative Dentistry.
E. T. HANDY, D.D.S., Professor of Prosthetic Dentistry.
E. M. JONES, D.D.S., Professor of Dental Metallurgy.
ORIN W. JOSLIN, M.D., D.D.S., Professor of Dental Pathology and Therapeutics.
FRANK E. DARLING, S.B., M.D., Professor of Bacteriology.
FREDERICK A. STRATTON, M.D., Lecturer on Oral Surgery.
LOUIS F. RUSCHHAUPT, S.B., M.D., Professor of Chemistry and Toxicology.
CURTIS A. EVANS, A.B., M.D., Professor of Anatomy.
GEORGE C. RUHLAND, M.D., Professor of Pathology.
M. A. BUSSEWITZ, A.M., M.D., Professor of Physiology.
RALPH P. PEAIRS, M.D., Professor of Physical Diagnosis and Anaesthesia.
M. M. SPITZ, M.D., Professor of Therapeutics.
HUGO F. PRUESSING, M.D., Lecturer on Neurology.

T. F. MATHEWS, Instructor in Prosthetic and Orthodontia Technics, and Instructor in Infirmary Clinic.

ADOLPH GROPPER, Lecturer, and Demonstrator of Crown and Bridge, Porcelain and Continuous Gum Work.

OTTO H. FOERSTER, M.D., Lecturer on Oral Manifestations of Syphilis.

HARRY G. MORTON, D.D.S., Demonstrator of Porcelain Inlay Work.

R. G. RICHTER, D.D.S., Lecturer on Oral Pathology and Surgery.

C. W. HALL, D.D.S., Lecturer on Oral Hygiene and Prophylaxis.

A. M. NEHS, D.D.S., Lecturer on Dental Economics.

W. W. GILLESPIE, S.B., M.D., Instructor in Anatomy.

RENO WEISS, D.D.S., Demonstrator of Clinical Orthodontia.

ALEXANDER KREMERS, M.D., Demonstrator of Anatomy.

JACOB G. SCHOTTLER, D.D.S., Lecturer on Dental Histology and Embryology.

MAX BORNSTEIN, M.D., Associate Professor, and Demonstrator of Anatomy.

G. C. RUHLAND, M.D., Lecturer on Histology.

J. S. JANSEN, Roentgenologist; Demonstrator of the X-ray in Dentistry.

CARL B. CASE, D.D.S., Demonstrator of Obturators for Cleft Palate.

W. S. DARLING, M.D., Assistant Demonstrator of Anatomy.

E. G. KOHLSDORF, D.D.S., Instructor in Dental Anatomy and Operative Technics.

EDWARD S. LOGE, PHAR. B., M.D., Lecturer on Dental Materia Medica.

THOMAS A. PURTELL, D.D.S., Instructor in Infirmary Clinic.

ALEX. R. CRAVEN, S.B., Lecturer on Inorganic Chemistry.

FRANK MAYR, D.D.S., Assistant Instructor in Dental Anatomy and Operative Technics.

E. T. HANDY, D.D.S., Instructor in Gold Inlay Fillings and Prosthetic Technics.

RAYMOND J. WENKER, D.D.S., Demonstrator of Clinical Oral Surgery and Chief Instructor in Infirmary Clinic.

ANDREW H. FRANKEL, M.D., Assistant Demonstrator of Anatomy.

E. MORTON JONES, D.D.S., Assistant Instructor in Prosthetic Technics.
E. J. W. NOTZ, D.D.S., Demonstrator in Infirmary Clinic.
E. G. WURSTER, L.L.B., Lecturer on Dental Jurisprudence.
ALEX. R. CRAVEN, S. B., Registrar.

General Statement.

The Wisconsin College of Dentistry, Dental Department of Carroll College, is located in Milwaukee on the corner of Fourth Street and Reservoir Avenue. The College offers a systematic and practical course of instruction covering a period of three years and leading up to the degree of Doctor of Dental Surgery.

Admission.

The requirements for admission to this department are graduation from a recognized high school, or an equivalent certificate showing credits in fourteen high school subjects, or the passing of an examination satisfactory to the regular examiner appointed by the State Superintendent of Public Instruction. For details write for the special catalogue of this department.

Course of Study.

The first year includes anatomy (descriptive and practical), histology, physiology, chemistry, prosthetic technics, operative technics, dental anatomy completed, prosthetic dentistry.

The second year the course includes anatomy, physiology, chemistry, toxicology, metallurgy, pathology, materia medica, operative and orthodontia technics, therapeutics, crown and bridge work, anaesthesia, oral surgery, physical diagnosis, pathology, prosthetic and operative dentistry, and bacteriology.

The third year course includes special pathology, therapeutics, oral surgery, orthodontia, dental jurisprudence, operative and prosthetic dentistry, crown and bridge work, ethics and history, dental ceramics, continuous gum work, materia medica, syphilology, and physical diagnosis. Time is given each day to practical work on patients in the Dental Infirmary, where an abundance of clinical material is obtainable.

Fees and Expenses.

The matriculation fee is $5.00 each year. The annual fee is $150.00, payable each year. The graduation fee is $15.00 A fee of $2.00 is charged for the use of microscopes. The required text-books cost from $15.00 to $20.00 the first year, and for the junior and senior years about $25.

The necessary tools and instruments cost from $40.00 to $50.00 the first year, and about $100.00 for the second and third years.

The purchase of instruments and books should be considered a permanent investment, for if properly cared for they will be of service to the student for many years after graduation. A course in manual training, or a natural inclination for mechanics, is a highly desirable qualification in beginning the study of dentistry.

There is an increasing demand for capable and skillful dentists and as a profession Dentistry takes its rank among the most honorable.

Fuller information is given in the special catalogue of the department, which may be obtained on application to the Dean or Registrar.

Roll of Students

COLLEGE.

Senior Class.

Anderson, Beatrice Elizabeth	Shawano, Wis.
Anderson, Berenice Janet	Shawano, Wis.
Baker, Frances Helen June	Stevens Point, Wis.
Benton, Grace Lucretia	Waukesha, Wis.
Cleverdon, Helen Frances	Chicago, Ill.
Phillips, Myrtle Agnes	Waukesha, Wis.
Richards, Mary America	Kit Carson, Col.
Stoltz, Edna Beatrice	Sechlerville, Wis.
Avery, Charles Henry	Quincy, Wis.
Blair, Frances John	Janesville, Wis.
Copps, Clinton William	Stevens Point, Wis.
Davis, John Rees	Racine, Wis.
Erickson, Louis Ockie	Wausaukee, Wis.
Evans, Ewart Owen	Genesee Depot, Wis.
Huenink, Henry Lawrence	Cedar Grove, Wis.
Lang, Emil Henry	Waukesha, Wis.
Spooner, Walter Deloss	Green Bay, Wis.
Upham, William Nathan	Marshfield, Wis.
Wakatsky, Yocie	Tokio, Japan

Junior Year.

Anderson, Laurel Eleanor	Manitowoc, Wis.
Baber, Florence Edith	Saint Paul, Minn.
Bean, Gertrude Sydney	Waukesha, Wis.
Campbell, Bessie Boardman	Wausau, Wis.
Carrier, Cornelia Myrta	Waukesha, Wis.
Erdman, Annabelle	Waukesha, Wis.
Griffith, Ellen Margaret	Genesee Depot, Wis.
McLean, Agnes Derby	Waukesha, Wis.
Rowlands, Sadie Belle	Waukesha, Wis.
Spickard, Julia	Richland Center, Wis.

Izumi, Massa	Akita, Japan
Koukol, Charles Joseph	Milwaukee, Wis.
Porter, Lawrence Clarke	Cambridge, Wis.
Ross, Leslie Hugh,	Waukesha, Wis.
Smith, Warren Braman	Waukesha, Wis.
Sockett, Herbert Thomas	W. Toronto, Can.

Sophomore Class.

Buchan, Katherine Frances	Waukesha, Wis.
Combacker, Marie Frances	Ellsworth, Wis.
Curtis, Maude Eliza	Horicon, Wis.
Davis, Grace	Richland Center, Wis.
Drought, Jenny Adaline	Waukesha, Wis.
Hendricks, Gertrude Winnefred	Chicago, Ill.
Hudson, Alice	Wausau, Wis.
Mair, Jean Morgan	Merrill, Wis.
Matthews, Maude Eunice	Waukesha, Wis.
Ormond, Jessie Cecelia	Neillsville, Wis.
Palmer, Alice Webber	Waukesha, Wis.
Ryan, Kathryn Frances	Waukesha, Wis.
Stofer, Leona	Richland Center, Wis.
Strand, Estelle Marguerite	Morgan, Minn.
Taylor, Lillian Vivian	Westfield, Wis.
Walvoord, Ada Adaline	Cedar Grove, Wis.
Watt, Ella Jeanette	Waukesha, Wis.
Weeks, Juliet Naomi	Waukesha, Wis.
Wiley, Jean Ballentine	Chicago, Ill.
Ash, Oliver Jay	LaCrosse, Wis.
Ayers, Augustus Townsend	Memphis, Tenn.
Baker, Alfred Henry	Stevens Point, Wis.
Bismarck, Clinton Orr	Wausau, Wis.
Brightman, Herbert W.	Wausaukee, Wis.
Buckley, John Francis	Waukesha, Wis.
Campbell, Hugh Martin	Wausau, Wis.
Copps, Lyman Alden	Stevens Point, Wis.
Feiring, Julius Ferdinand	Waukesha, Wis.
Fletcher, Edwin Wesley	Westfield, Wis.
Frisk, Elmer	Green Bay, Wis.

Harris, John Coman	Waukesha, Wis.
Hommel, Placido R. V.	Neillsville, Wis.
Humphrey, Arthur	Shawano, Wis.
Jenkins, Floyd E.	Bangor, Wis.
Johnson, Paul Sheldon	Omro, Wis.
Laing, Royden Arthur	Sechlerville, Wis.
McKean, Charles Robert	Woodson, Ill.
McMullen, Alexander Clifford	Appleton, Wis.
Peterson, Clarence Eugene	Green Bay, Wis.
Pomeroy, Harry B.	Amberst, Wis.
Smith, John Wesley	Fosterville, Wis.
Textor, Arthur Henry	Wausau, Wis.
Wellington, John V.	Winneconne, Wis.

Freshman Class.

Audiss, Fannie Moss	Westfield, Wis.
Bayless, Ninetta L.	Hayworth, Ill.
Bennett, Marjorie	Janesville, Wis.
Bever, Barbara Agnes	Oshkosh, Wis.
Black, Margaretta	Crandon, Wis.
Brown, Hazel	Waukesha, Wis.
Burch, Edna Lucile	Greenwood, Wis.
Clark, Margaret Edwards	Wausau, Wis.
Edwards, Catharine Anderson	Wales, Wis.
Federer, Josephine Amelia	Waukesha, Wis.
Glover, Helen Keane	Waukesha, Wis.
Haight, Margaret Adele	Waukesha, Wis.
Hawtin, Myrtle Eugenia	Waukesha, Wis.
Howard, Beatrice M.	Waukesha, Wis.
Howard, Beatrice Margarette	Greenwood, Wis.
Lipke, Esther Sarah	Readfield, Wis.
McNamara, Dora Winifield	Ironwood, Mich.
Morris, Florence Jane	Cambria, Wis.
Nohr, Agnes Josephine	Waupaca, Wis.
Osborn, Mary Bernice	Endeavor, Wis.
Rodger, Daisy Margaret	Endeavor, Wis.
Schilling, Grace Elizabeth	Abbottsford, Wis.
Shanks, Grace Mary	Greenwood, Wis.

Shoemaker, Laura Mary	Waupaca, Wis.
Smith, Anna Cornelia	Waukesha, Wis.
Snyder, Estelle Marie	Waukesha, Wis.
Stevens, Eunice Morgan	Ironwood, Mich.
Upham, Frances Louise	Greenwood, Wis.
Walters, Bessie Adelaide	Bessemer, Mich.
Walters, Ethel Lucile	Bessemer, Mich.
Anderson, James Magee	Shawano, Wis.
Archbold, Arthur Adrian	Brookfield, Ill.
Arnold, Byron VanDusen	Rhinelander, Wis.
Bell, James Adam	Mosinee, Wis.
Benjamin, Mooshie Sargis	Oroomia, Persia.
Benton, John Knox	Richland Center, Wis.
Bergholte, Frederick John	Amherst, Wis.
Bissell, Spencer Pease	West Allis, Wis.
Braun, Frederick William	Wausau, Wis.
Brown, Donald Christy	Waukesha, Wis.
Bruns, Donald Copeland	Lake Mills, Wis.
Caldwell, James Donald	Rhinelander, Wis.
Campbell, Irving Earl	Oconto, Wis.
Coye, Clarence William	Stevens Point, Wis.
Dropp, Edward Wilbur	Middle Inlet, Wis.
Ellman, Harry Arthur	Oconto, Wis.
Ellert, Arthur Maximillian	West Allis, Wis.
Fogo, Hugh	Gillingham, Wis.
Getchell, Herbert H.	Baraboo, Wis.
Gordon, Leslie Edward	Glidden, Wis.
Gray, George Millard	Coloma, Wis.
Grebel, Leslie	Green Bay, Wis.
Grebel, Ralph Emerson	Green Bay, Wis.
Hartman, Howard Albert	Waukesha, Wis.
Hull, Sydney Marion	Montello, Wis.
Jackson, Alf Kenelmn	Menomonee, Wis.
Jackson, Leo Milan	Neillsville, Wis.
Johnson, Edward John	Melrose, Wis.
Johnson, Lawrence Alban	Wausau, Wis.
Johnson, Welton Ellery	Amherst, Wis.
Jones, Dewitt	Waukesha, Wis.

Lee, Henry Rhodes	Oostberg, Wis.
Lundberg, William	Boulder, Cal.
Lunt, Alfred Davis	Waukesha, Wis.
McDonald, Guy Foster	Arbor Vitae, Wis.
Means, Lester Albert	Merrill, Wis.
Mussehl, Harrison Walter	Fort Atkinson, Wis.
Northrop, Harson Atwood	Beloit, Wis.
Olson, Russell Edwin	Arbor Vitae, Wis.
Owen, Lloyd Thomas	Ironwood, Mich.
Raue, Edward	Neenah, Wis.
Roberts, Frank Lewis	Waukesha, Wis.
Rodolf, Mac Carroll	Fairview, New Mexico.
Rohde, Orvin William	Fort Atkinson, Wis.
Rothe, Lester William	Kilbourn, Wis.
Saunders, Oliver Charles	Dousman, Wis.
Saunderson, George Clare	Milwaukee, Wis.
Schmid, George	Chicago, Ill.
Singleman, William Jay	Merrill, Wis.
Stabler, Milburn Eppley	Lansing, Mich.
Thiele, Arthur Albert	Green Bay, Wis.
Thomas, Henry Hudson	Chattanooga, Tenn.
Tibbitts, Armand Rhodes	Waukesha, Wis.
Turgasen, Francis Edward	Richland Center, Wis.
Vaughan, Donald Hugh	Rhinelander, Wis.
Weaver, Ray Bennett	Sussex, Wis.
Williams, William Thomas	Waukesha, Wis.
Winslow, Joseph Charles	Omro, Wis.
Youmans, John Marlow	Mukwonago, Wis.
Young, Carl Fred	Green Bay, Wis.

ACADEMY.

Fourth Year.

Brown, Grace Rodgers	Waukesha, Wis.
Buswell, Lucy Jane	Hurley, Wis.
Champeny, Bernice	Hartland, Wis.
Holtz, Edna Florence	Waukesha, Wis.
Jensen, Olga Eleanor	Oshkosh, Wis.

McKenzie, Ethelyn	Waukesha, Wis.
Breese, Clinton Samuel	Waukesha, Wis.
Erickson, Arthur Leonard	Wausaukee, Wis.
Guthrie, Chauncey Tilyard	Waukesha, Wis.
Neilson, Christian Byrholdt	Neenah, Wis.
Skinner, Clarence Leslie	Morgan, Minn.

Third Year.

Bartholomew, Ethelwyn Louise	Racine, Wis.
Chapman, Lucy Leola	Waukesha, Wis.
Clayton, Addie May	Waukesha, Wis.
Crary, Zenanna	Waukesha, Wis.
Flieth, Mabel	Wausau, Wis.
Fries, Grace Julian	Waterford, Wis.
Jenkins, Ruth Mary	Wales, Wis.
McVicar, Ione	Milwaukee, Wis.
Michel, Mathilda Margaret	Waukesha, Wis.
Robinson, Nellie Mae	Wells, Mich.
Ryan, Josephine Agnes	Waukesha, Wis.
Watt, Grace Alberta	Waukesha, Wis.
Brightman, Albert Brown	Wausaukee, Wis.
Carrier, Reno George	Lansing, Mich.
Dey, Albert VanBrunt	Waukesha, Wis.
Federer, Francis Albert	Waukesha, Wis.
Fuller, Edwin	Hartland, Wis.
Imig, Wilbur S.	Waukesha, Wis.
Love, Addison Forbes	Waukesha, Wis.
Miller, Lawrence Adams	Beloit, Wis.
Notbohm, DeLon	Dousman, Wis.
Olson, Grover Cleveland	Kilbourn, Wis.
Romer, Godfred James	Neenah, Wis.
Winton, Howard Abram	Prospect, Wis.
Young, John Harrison	North Bend, Wis.

Second Year.

Beare, Helen Margaret	Milwaukee, Wis.
Bostwick, Leola	Waukesha, Wis.
Douglass, Marjorie Ruth	Waukesha, Wis.

Federle, Eugenia Martha	West Bend, Wis.
Federle, Rudolfine	West Bend, Wis.
Loose, Kathryn Alice	Waukesha, Wis.
Murray, Mary	Polo, Ill.
Ross, Eva Marie	Alliance, Neb.
Seymour, Ida Marie	Polo, Ill.
Vanderpool, Ethel May	Nashotah, Wis.
West, Mildred Lucy	Chicago, Ill.
Wiesenthal, Florence Jennie	Waukesha, Wis.
Williams, Margaret Anna	Wales, Wis.
Ackley, Henry Breck	Waukesha, Wis.
Cowling, William Richard	Wausau, Wis.
Edwards, Robert Thomas	Wales, Wis.
Gaspar, Harold Lee	Waukesha, Wis.
Laney, Thomas David	Dousman, Wis.
Latham, Lloyd Winslow	Abbottsford, Wis.
Lewis, Hugh Alban	Rhinelander, Wis.
Shepard, Layton Sydney	Rhinelander, Wis.

First Year.

Erbe, Elizabeth Mary	Delafield, Wis.
Estberg, Lola Sophia	Waukesha, Wis.
Higgins, Irene	Eagle River, Wis.
Lees, Hazel Olive	Milwaukee, Wis.
Phillips, Ruth Jeanette	Waukesha, Wis.
Plumb, Jessie Lillian	Hartford, Wis.
Plumb, Leah Estelle	Hartford, Wis.
Putney, Jean Marion	Waukesha, Wis.
Thomas, Crystal Alberta	Fosterville, Wis.
VanVranken, Hazel Kirk	Hartland, Wis.
Chapman, Cosmo Lellan	Waukesha, Wis.
Hill, George Manett	Falls Creek, Pa.
Hoppe, Julius Ernst Theodore	Green Bay, Wis.
Michel, Roman Louis	Waukesha, Wis.

MUSIC DEPARTMENT.

Voice.

Carrier, Cornelia	Waukesha, Wis.
Drought, Jenny	Waukesha, Wis.

Holtz, Edna	Waukesha, Wis.
Lipke, Esther	Readfield, Wis.
McNamara, Dora	Ironwood, Mich.
Stare, Madge	Waukesha, Wis.
Taylor, Lillian	Westfield, Wis.
Walters, Ethel	Bessemer, Mich.
Yandre, Marie	Waukesha, Wis.
Bell, James	Mosinee, Wis.
Benjamin, Mooshie	Oroomia, Persia.
Carrier, Reno	Lansing, Mich.
McKean, Charles	Woodson, Ill.
Porter, Clarke	Cambridge, Wis.
Ross, Leslie	Waukesha, Wis.

Piano.

Ackley, Henry	Waukesha, Wis.
Bancroft, Delbert	Waukesha, Wis.
Benjamin, Mooshie	Oroomia, Persia
Bostwick, Leola	Waukesha, Wis.
Brockman, Ruth	Waukesha, Wis.
Brown, Grace	Waukesha, Wis.
Brown, Helen	Waukesha, Wis.
Bruce, Beatrice	Waukesha, Wis.
Burch, Edna	Greenwood, Wis.
Campbell, Eleanor	Waukesha, Wis.
Campbell, Mildred	Waukesha, Wis.
Crary, Zenanna	Waukesha, Wis.
Dey, Katherine	Waukesha, Wis.
Estberg, Lola	Waukesha, Wis.
Estberg, Margaret	Waukesha, Wis.
Evans, Ewart	Genesee Depot, Wis.
Gaspar, Harold	Waukesha, Wis.
Hardy, Anna	Waukesha, Wis.
Hardy, Earl	Waukesha, Wis.
Hardy, Ruth	Waukesha, Wis.
Harter, Marian	Waukesha, Wis.
Hartman, Mildred	Waukesha, Wis.
Higgins, Irene	Eagle River, Wis.
Kendall, Edna	Waukesha, Wis.

Laughlin, Margaret	Waukesha, Wis.
Levine, Amy	Waukesha, Wis.
Lipke, Esther	Readfield, Wis.
Love, Anna	Waukesha, Wis.
Love, Helen	Waukesha, Wis.
Love, Mildred	Waukesha, Wis.
McNamara, Dora	Ironwood, Mich.
Orth, Lovisa	Hartland, Wis.
Phillips, Ruth	Waukesha, Wis.
Pomeroy, Harry	Amherst, Wis.
Putney, Jean	Waukesha, Wis.
Roberts, Ethel	Waukesha, Wis.
Ross, Jessie	Waukesha, Wis.
Rothe, Lester	Kilbourn, Wis.
Schilling, Grace	Abbotsford, Wis.
Seymour, Ida	Polo, Ill.
Shanks, Grace	Greenwood, Wis.
Shoemaker, Laura	Waupaca, Wis.
Smith, Anna	Waukesha, Wis.
Strong, Lillian	Waukesha, Wis.
Taylor, Lillian	Westfield, Wis.
Thomas, Crystal	Fosterville, Wis.
Thomas, Evelyn	Waukesha, Wis.
Thomas, Fay	Waukesha, Wis.
Thomas, Gerald	Waukesha, Wis.
Thomas, Ione	Waukesha, Wis.
Vanderpool, Ethel	Nashota, Wis.
VanGriethuysen, Claude	Waukesha, Wis.
Walters, Bessie	Bessemer, Mich.
Weaver, Nettie	Sussex, Wis.
Weber, Virginia	Waukesha, Wis.
Weir, Leda	Waukesha, Wis.

Mandolin and Guitar.

Archbold, Arthur	Brookfield, Ill.
Bever, Barbara	Oshkosh, Wis.
Brehm, Josephine	Waukesha, Wis.
Brightman, Herbert	Waukesha, Wis.
Burch, Edna	Greenwood, Wis.

Christoph, Lucile	Waukesha, Wis.
Coye, Clarence	Stevens Point, Wis.
Getchell, Herbert	Baraboo, Wis.
Gordon, Frances	Waukesha, Wis.
Griffith, Ellen	Genesee Depot, Wis.
Hartman, Howard	Waukesha, Wis.
Hendricks, Gertrude	Chicago, Ill.
Johnson, Lawrence	Wausau, Wis.
Korn, Earl	Waukesha, Wis.
Latham, Lloyd	Abbotsford, Wis.
Lees, Hazel	Milwaukee, Wis.
Miller, Lawrence	Beloit, Wis.
Palmer, Alice	Waukesha, Wis.
Phelps, Kenneth	Waukesha, Wis.
Rothe, Lester	Kilbourn, Wis.
Saunderson, George	Milwaukee, Wis.
Smith, Anna	Waukesha, Wis.
Smith, Donald	Waukesha, Wis.
Stabler, Milburn	Lansing, Mich.
Strong, Lillian	Waukesha, Wis.
West, Mildred	Chicago, Ill.
Wheeler, Dorothy	Waukesha, Wis.
Wheeler, Evelyn	Waukesha, Wis.

MEDICAL DEPARTMENT.

Seniors.

Bauch, Charles Wm.	Wisconsin
Binnie, Helen	Wisconsin
Brastad, Louis	Montana
Carthous, Alfred Herman	Wisconsin
Domann, William	Wisconsin
Franklin, Isadore	Wisconsin
Kleven, C. E.	Iowa
Kremers, W. G., D. D. S.	Wisconsin
Lobedan, Emil	Wisconsin
Meyer, Raymond Carl	Wisconsin
Moquin, Marie A.	Minnesota
Phillips, Frank	Wisconsin

Schmidt, Fred M.	Wisconsin
Stolz, Engels Charles	Wisconsin
Voorus, Leo	Wisconsin
Williams, David Lloyd	Wisconsin
Wiltrout, I. G.	Wisconsin

Juniors.

Dowswell, Walter	Minnesota
Fencil, Yearslaf J.	Wisconsin
Karras, Ray Waldo	Wisconsin
Keland, Geo. A.	South Dakota
Keland, Herald Berg	South Dakota
Le Gault, George Alex.	Wisconsin
Wenzel, Edwin Frank	Wisconsin
Winnemann, Walter J.	Wisconsin

Sophomores.

Amundson, Karl	Wisconsin
Brook, Jeffrey J., Jr.	Wisconsin
Boynton, Ray D.	Wisconsin
Cowles, Andrew	Illinois
Cowles, Robert	Illinois
De Nosaqua, Samuel	Wisconsin
Dailey, Paul John	Wisconsin
Durner, Urban	Wisconsin
Gallant, Benjamin F.	Wisconsin
Hirschbeck, John	Wisconsin
Holmes, Benjamin	Wisconsin
Kumm, Vernon	Wisconsin
Moeller, Maximilian	Wisconsin
Priestman, A.	Illinois
Nebhan, Yusef Jehjah	Syria
Nelson, Raymond	Wisconsin
van Schaick, Harold	Wisconsin
Stolz, Henry	Wisconsin
Towle, George	Wisconsin
Thompson, William	Wisconsin

Freshmen.

Allen, Sylvester	Wisconsin
Bensen, W. J. H.	Illinois

Dittberner, Fred	Wisconsin
Fitz, Erwin O.	Wisconsin
Grant, Hugh	Wisconsin
Korthals, F. J.	Wisconsin
Majuras, Peter	Wisconsin
Prokupek, Joseph	Wisconsin
Stueck, Arthur F.	Wisconsin
Sefert, Paul	Wisconsin
Weber, Henry	Wisconsin
Zimmer, A.	Wisconsin

DENTAL DEPARTMENT.

Seniors.

Buck, Roy	Wisconsin
Donovan, John M.	Wisconsin
Gilbert, Zino W.	Wisconsin
Gratz, Charles	Wisconsin
Sparks, Frank	Wisconsin
Zwerg, O. M.	Wisconsin

Juniors.

Dittberner, Fred. J.	Wisconsin
Klein, Charles Joseph	Wisconsin
Negard, Otis Emory	Wisconsin
Prokupek, Joseph	Wisconsin
Rubin, William	Wisconsin
Winn, Adelbert C.	Wisconsin

Freshmen.

Backus, Alvin D.	Wisconsin
zum Buttel, Ralph	Wisconsin
Grant, Hugh	Wisconsin
Kailen, Max	Wisconsin
Rieboldt, Charles E.	Wisconsin
Smith, S. G.	Wisconsin
Washburn, Harry	Wisconsin
Wingarter, M. F.	Wisconsin

Summary of Students.

COLLEGE:		
Seniors	19	
Juniors	16	
Sophomores	43	
Freshmen	91	
	—	169
MUSIC DEPARTMENT:		
Voice	15	
Piano	56	
Mandolin and Guitar	28	
	—	99
ACADEMY		71
		339
Duplicates		58
Net total		281
MEDICAL DEPARTMENT		57
DENTAL DEPARTMENT		20
Total		358

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UNIVERSITY OF ILLINOIS

PRESIDENT'S OFFICE

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